**Colour Television** **Chassis**

# FM23 AC, FM24 AB, FM33 AA

Service
Service
**Service**

# ServiceManual

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**PHILIPS**

# 1. Technical Specifications, Connections and Chassis Overview

Index of this chapter:
1. Technical Specifications
2. Connections
3. Chassis Overview

**Note:** Figures below can deviate slightly from the actual situation, due to the different set executions.

## 1.1 Technical Specifications

### 1.1.1 Picture

| | |
|---|---|
| Display | : FHT plasma panel |
| Screen sizes | : 32-inch (82 cm) |
| | : 37-inch (94 cm) |
| | : 42-inch (107 cm) |
| Resolution (pixels) | : 852(*3)x1024 (32") |
| | : 1024(*3)x1024 (37") |
| | : 1024(*3)x1024 (42") |
| Contrast ratio | : 400 : 1 |
| Light output | : 600 cd/m^2 |
| Viewing angle | : 160 deg (H) |
| | : 160 deg (V) |

### 1.1.2 Sound

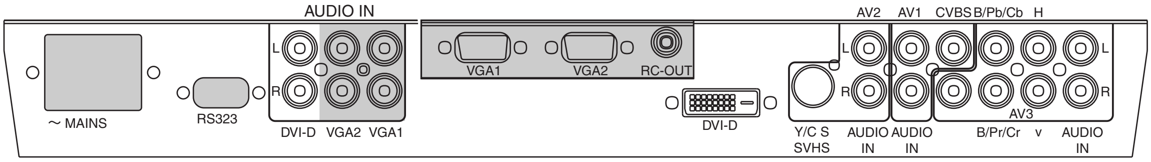
| | |
|---|---|
| Maximum power | : 30 W_rms |

### 1.1.3 Miscellaneous

| | |
|---|---|
| Mains voltage | : 95 - 264 V |
| Mains frequency | : 50 / 60 Hz |
| Ambient temperature | : + 5 to + 40 deg. C |
| Maximum humidity | : 90 % R.H. |
| Power dissipation | : ≈ 280 W (32") |
| | : ≈ 300 W (37") |
| | : ≈ 380 W (42") |
| Standby Power dissipation | : < 3 W |
| Weight | : 24 kg (32-inch) |
| | : 30 kg (37-inch) |
| | : 36 kg (42-inch) |
| Dimens. (WxHxD) in mm | : 964x512x89 (32") |
| | : 1060x580x90 (37") |
| | : 1210x660x90 (42") |

## 1.2 Connections

### 1.2.1 Rear Connections



▨ ! All Functional blocks shaded grey are required for the"Basic Configuration".
The remainder is required for the "Enhanced Configuration".

CL 16532099_010.eps
260801

Figure 1-1 Rear View

***RS232***

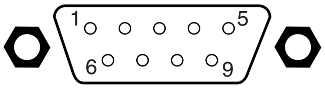


Figure 1-2 RS232 Connector

| | | | |
|---|---|---|---|
| 1 - | | | |
| 2 - TXD | (UART) | | ○→ |
| 3 - RXD | (UART) | | →○ |
| 4 - RL_ICN | (ICONN) | | →○ |
| 5 - | Ground | | ⏚ |
| 6 - GL_ICN | (ICONN) | | ○→ |
| 7 - LD_ICN | (ICONN) | | ○→ |
| 8 - IR_TX | (ICONN) | | ○→ |
| 9 - IR_RX | (ICONN) | | →○ |
| 10 - | Ground | | ⏚ |
| 11 - | Ground | | ⏚ |

***Audio - In (DVI-D) ****

| | | |
|---|---|---|
| - - Audio - L | 0.5 V_rms / 1 kohm | →○◎ |
| - - Audio - R | 0.5 V_rms / 1 kohm | →○◎ |

***Audio - In (VGA2)***

| | | |
|---|---|---|
| - - Audio - L | 0.5 V_rms / 1 kohm | →○◎ |
| - - Audio - R | 0.5 V_rms / 1 kohm | →○◎ |

***Audio - In (VGA1)***

| | | |
|---|---|---|
| - - Audio - L | 0.5 V_rms / 1 kohm | →○◎ |
| - - Audio - R | 0.5 V_rms / 1 kohm | →○◎ |

***VGA1 - In***

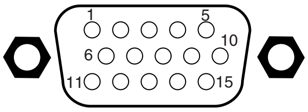


Figure 1-3 VGA Connector

| | | |
|---|---|---|
| 1 - Red | 0.7 V_pp / 75 ohm | →○ |
| 2 - Green | 0.7 V_pp / 75 ohm | →○ |
| 3 - Blue | 0.7 V_pp / 75 ohm | →○ |
| 4 - TXD | | ○→ |
| 5 - | Ground | ⏚ |
| 6 - Red | Ground | ⏚ |
| 7 - Green | Ground | ⏚ |
| 8 - Blue | Ground | ⏚ |
| 9 - RC | | ○→ |
| 10 - | Ground | ⏚ |
| 11 - RXD | | →○ |
| 12 - DDC_SDA | | →○ |
| 13 - H-sync | 0 - 5 V | →○ |
| 14 - V-sync | 0 - 5 V | →○ |

|  |  |  |
|---|---|---|
| 15 - DDC_SCL |  | →○ |

### *VGA2 - Out*

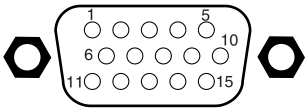


**Figure 1-4 VGA Connector**

|  |  |  |
|---|---|---|
| 1 - Red | (0.7 V_pp/75 ohm) | ○→ →○ |
| 2 - Green | (0.7 V_pp/75 ohm) | ○→ →○ |
| 3 - Blue | (0.7 V_pp/75 ohm) | ○→ →○ |
| 4 - TXD |  | ○→ |
| 5 - | Ground | ⏚ |
| 6 - Red | Ground | ⏚ |
| 7 - Green | Ground | ⏚ |
| 8 - Blue | Ground | ⏚ |
| 9 - |  |  |
| 10 - | Ground | ⏚ |
| 11 - RXD |  | →○ |
| 12 - DDC_SDA |  | →○ |
| 13 - H-sync | 0 - 5 V | ○→ →○ |
| 14 - V-sync | 0 - 5 V | ○→ →○ |
| 15 - DDC_SCL |  | →○ |

### *RC - Out*

|  |  |
|---|---|
| - - RC | ○→◎ |

### *DVI-D **

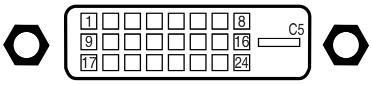


**Figure 1-5 DVI-D Connector**

|  |  |  |
|---|---|---|
| 1 - RX2- |  | →○ |
| 2 - RX2+ |  | →○ |
| 3 - | Ground | ⏚ |
| 4 - |  |  |
| 5 - |  |  |
| 6 - DDC-SCL |  | ○→ |
| 7 - DDC-SDA |  | ○→ |
| 8 - |  |  |
| 9 - RX1- |  | →○ |
| 10 - RX1+ |  | →○ |
| 11 - | Ground | ⏚ |
| 12 - |  |  |
| 13 - |  |  |
| 14 - 5V_STBY_SW |  |  |
| 15 - | Ground | ⏚ |
| 16 - 5V_STBY_SW |  |  |
| 17 - RX0- |  | →○ |
| 18 - RX0+ |  | →○ |
| 19 - | Ground | ⏚ |
| 20 - |  |  |
| 21 - | Ground | ⏚ |
| 22 - |  |  |
| 23 - RXC+ |  | →○ |
| 24 - RXC- |  | →○ |
| C5- | Ground | ⏚ |

### *AV2: SVHS - In **

|  |  |  |
|---|---|---|
| 1 - Y | Ground | ⏚ |
| 2 - C | Ground | ⏚ |
| 3 - Y | 1 V_pp / 75 ohm | →○ |
| 4 - C / 16:9 | 0.3 V_pp / 75 ohm | →○ |

### *AV2: Audio - In **

|  |  |  |
|---|---|---|
| - - Audio - L | 0.5 V_rms/10 kohm | →○◎ |
| - - Audio - R | 0.5 V_rms/10 kohm | →○◎ |

### *AV1: Audio/Video - In **

|  |  |  |
|---|---|---|
| - - CVBS | 1 V_pp / 75 ohm | →○◎ |
| - - Audio - L | 0.5 V_rms / 10 kohm | →○◎ |
| - - Audio - R | 0.5 V_rms / 10 kohm | →○◎ |

### *AV3: Audio/Video - In **

|  |  |  |
|---|---|---|
| - - G/Y/Y | 0.7 V_pp / 75 ohm | →○◎ |
| - - B/Pb/Cb | 0.7 V_pp / 75 ohm | →○◎ |
| - - R/Pr/Cr | 0.7 V_pp / 75 ohm | →○◎ |
| - - H |  | →○◎ |
| - - V |  | →○◎ |
| - - Audio - L | 0.5 V_rms / 10 kohm | →○◎ |
| - - Audio - R | 0.5 V_rms / 10 kohm | →○◎ |

(*) Only available in the *Enhanced* version.

## 1.3 Chassis Overview

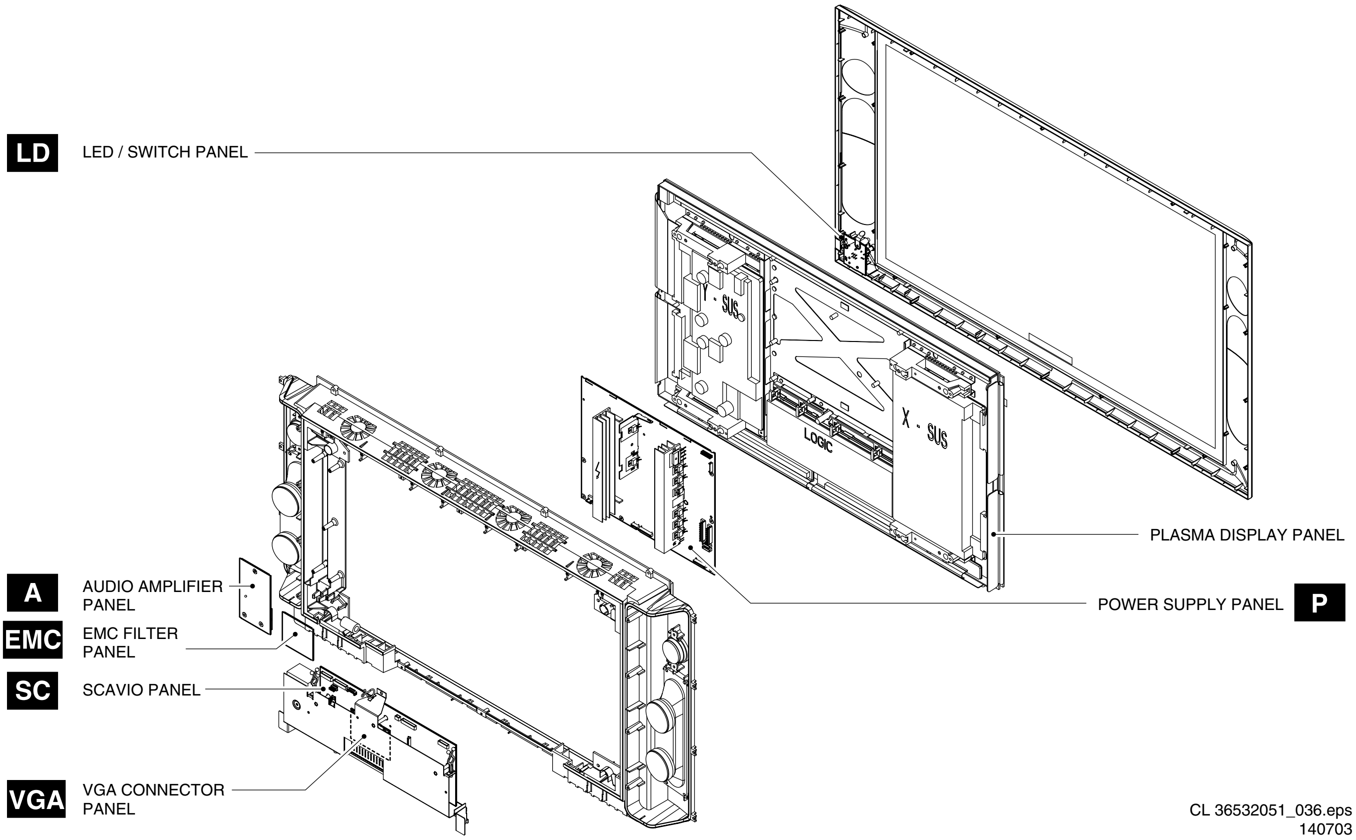

LD
LED / SWITCH PANEL
Y - SUS
LOGIC
X - SUS
PLASMA DISPLAY PANEL
POWER SUPPLY PANEL
P
A
AUDIO AMPLIFIER PANEL
EMC
EMC FILTER PANEL
SC
SCAVIO PANEL
VGA
VGA CONNECTOR PANEL
CL 36532051_036.eps
140703

Figure 1-6 PWB Location

# 2. Safety Instructions, Warnings, and Notes

## 2.1 Safety Instructions

Safety regulations require that **during** a repair:

- Connect the set to the mains via an isolation transformer (= 800 VA).
- Do not operate the monitor without the front glass plate. One function of this glass plate is to absorb IR radiation. Without this glass plate, the level of radiation could damage your eyes.
- Replace safety components, indicated by the symbol ⚠, only by components identical to the original ones.

Safety regulations require that **after** a repair, the set must be returned in its original condition. Pay, in particular, attention to the following points:

- Route the wire trees correctly and fix them with the mounted cable clamps.
- Check the insulation of the mains lead for external damage.
- Check the electrical DC resistance between the mains plug and the secondary side (only for sets which have a mains isolated power supply):
  1. Unplug the mains cord and connect a wire between the two pins of the mains plug.
  2. Set the mains switch to the "on" position (keep the mains cord unplugged!).
  3. Measure the resistance value between the pins of the mains plug and the metal shielding of the tuner or the aerial connection on the set. The reading should be between 4.5 Mohm and 12 Mohm.
  4. Switch "off" the set, and remove the wire between the two pins of the mains plug.
- Check the cabinet for defects, to avoid touching of any inner parts by the customer.

## 2.2 Warnings

- All ICs and many other semiconductors are susceptible to electrostatic discharges (ESD ⚠). Careless handling during repair can reduce life drastically. Make sure that, during repair, you are connected with the same potential as the mass of the set by a wristband with resistance. Keep components and tools also at this same potential. Available ESD protection equipment:
  - Complete kit ESD3 (small tablemat, wristband, connection box, extension cable and earth cable) 4822 310 10671.
  - Wristband tester 4822 344 13999.
- Be careful during measurements in the high voltage section.
- Never replace modules or other components while the unit is switched "on".
- When you align the set, use plastic rather than metal tools. This will prevent any short circuits and the danger of a circuit becoming unstable.

## 2.3 Notes

- Clean the glass plate in front of the plasma display with a slightly humid cloth. If, due to circumstances, there is some dirt between the glass plate and the plasma display, this must be cleaned by a qualified service engineer (see chapter 4).
- Measure the direct voltages and oscillograms with regard to the chassis ground (⏚), or hot ground (⏚) as this is called.
- The direct voltages and oscillograms shown in the diagrams are indicative. Measure them in the Service Default Mode (see chapter 5).
- Where necessary, measure the voltages in the power supply section both in normal operation (⏽) and in standby (⏻). These values are indicated by means of the appropriate symbols.
- The semiconductors indicated in the circuit diagram and in the parts lists, are interchangeable per position with the semiconductors in the unit, irrespective of the type indication on these semiconductors.

### 2.3.1 Schematic Notes

- All resistor values are in ohms and the value multiplier is often used to indicate the decimal point location (e.g. 2K2 indicates 2.2 kohm).
- Resistor values with no multiplier may be indicated with either an "E" or an "R" (e.g. 220E or 220R indicates 220 ohm).
- All capacitor values are expressed in micro-farads (μ= x10^-6), Nano-Farads (n= x10^-9), or pico-farads (p= x10^-12).
- Capacitor values may also use the value multiplier as the decimal point indication (e.g. 2p2 indicates 2.2 pF).
- An "asterisk" (*) indicates component usage varies. Refer to the diversity tables for the correct values.
- The correct component values are listed in the Electrical Replacement Parts List. Therefore, always check this list when there is any doubt.

### 2.3.2 Rework on BGA (Ball Grid Array) ICs

***General***

Although (LF)BGA assembly yields are very high, there may still be a requirement for component rework. By rework, we mean the process of removing the component from the PWB and replacing it with a new component. If an (LF)BGA is removed from a PWB, the solder balls of the component are deformed drastically so the removed (LF)BGA has to be discarded.

***Device removal***

As is the case with any component, it is essential when removing an (LF)BGA, that the board, tracks, solder lands, or surrounding components are not damaged. To remove an (LF)BGA, the board must be uniformly heated to a temperature close to the reflow soldering temperature. A uniform temperature reduces the chance of warping the PWB.
To do this, we recommend that the board is heated until it is certain that all the joints are molten. Then carefully pull the component off the board with a vacuum nozzle. For the appropriate temperature profiles, see the IC data sheet.

***Area preparation***

When the component has been removed, the vacant IC area must be cleaned before replacing the (LF)BGA.
Removing an IC often leaves varying amounts of solder on the mounting lands. This excessive solder can be removed with either a solder sucker or solder wick. The remaining flux can be removed with a brush and cleaning agent.
After the board is properly cleaned and inspected, apply flux on the solder lands and on the connection balls of the (LF)BGA.
**Note:** Do not apply solder paste, as this has shown to result in problems during re-soldering.

***Device replacement***

The last step in the repair process is to solder the new component on the board. Ideally, the (LF)BGA should be aligned under a microscope or magnifying glass. If this is not possible, try to align the (LF)BGA with any board markers.
To reflow the solder, apply a temperature profile according to the *IC data sheet*. So as not to damage neighbouring components, it may be necessary to reduce some temperatures and times.

# 3. Directions for Use

## 3.1 Basic

### Unpacking and wall mounting instructions

For the unpacking instructions follow the illustrated steps printed on the packaging (outside and inside). For the wall mounting instructions follow the illustrated steps ❹ to ❻ printed on the separate leaflet.

Make sure that the wall mount is being fixed securely enough so that it meets safety standards. The weight of the monitor (excl. packaging) is about 24 kg (32"), 30 kg (37") and 35,5 kg (42").

*Note: Stands are optional accessories. Consult your dealer.*

**Connect your electronic receiver box**
See the separate supplied instruction manual with your receiver box.

### Connect your computer

**To the receiver box**

See the illustration in the inside frontcover of this handbook.

❶ Connect one end of a VGA cable to the video card of the computer and the other end to the **VGA IN** connector at the rear side of the receiver box. Fix the connectors firmly with the screws on the plug.

❷ In case of a Multimedia computer, connect the audio cable to the audio outputs of your Multimedia computer and to the **AUDIO VGA R** (right) and **L** (left) inputs of the receiver box.

**Directly to the monitor**

❶ Connect one end of a VGA cable ① to the video card of the computer and the other end to the **VGA 1** connector at the rear side of the monitor. Fix the connectors firmly with the screws on the plug.

❷ In case of a Multimedia computer, connect the audio cable ② to the audio outputs of your Multimedia computer and to the **AUDIO VGA 1 R** (right) and **L** (left) inputs of the monitor.

**Daisy chaining**

The Loop Through facility makes it possible to make a daisy chain with a second monitor.

❸ Connect one end of another VGA cable to the **VGA 2** connector at the rear side of the monitor and the other end to the **VGA 1** connector of a second monitor.

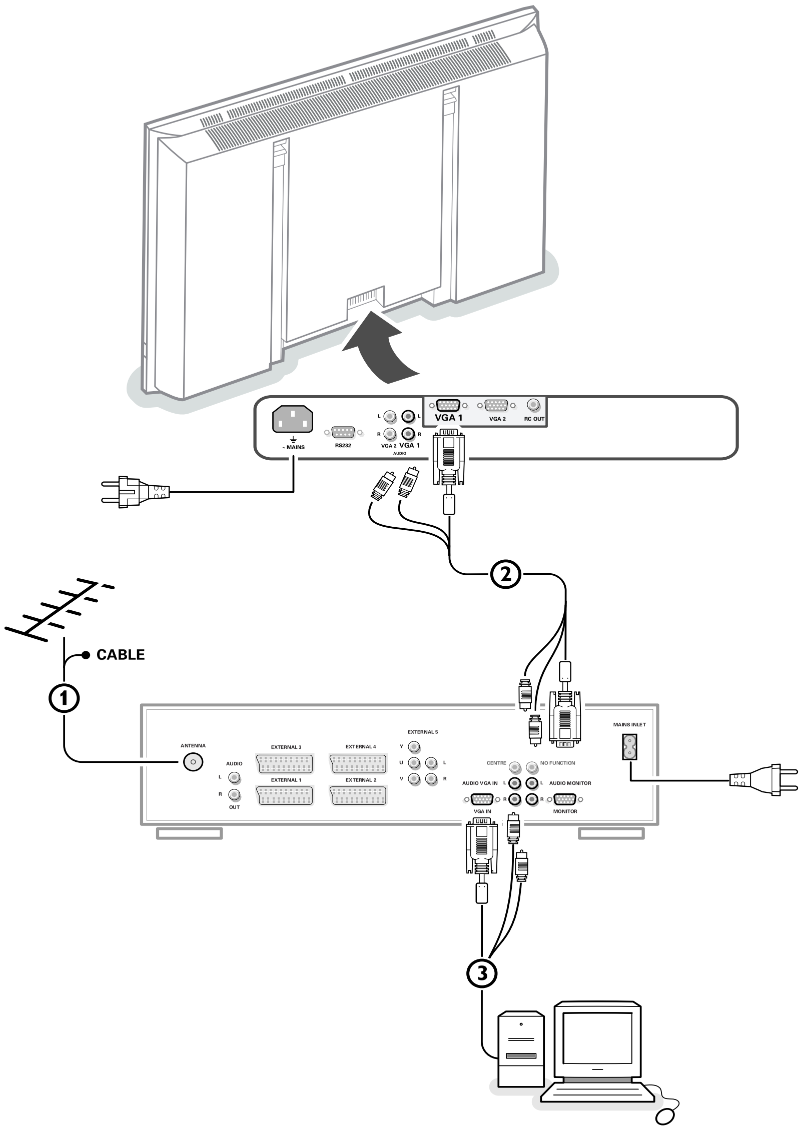
❹ In case of a Multimedia computer, also connect audio cables to the **AUDIO L** and **R** outputs of the original monitor and to the **AUDIO L** and **R** inputs of the second monitor.

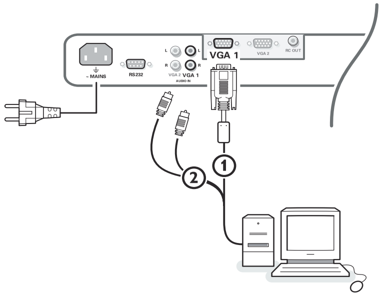
*The RC out jack next to the VGA 2 connector makes it possible to daisy chain remote control signals to other equipment. This output cannot be used to daisy chain a second monitor.*

**Serial I/O port RS232**

The RS232 connector is only to be used with the monitor as stand alone.
This connector allows you to control the monitor via your PC (as a replacement of the remote control).

*Note: This connector can also be used for dealer service tools.*





## Monitor Display modes

| | | |
|---|---|---|
| VGA | 640x480 | 60, 72, 75, 85 Hz |
| Wide VGA | 848x480 | 60 Hz |
| Wide VGA | 852x480 | 60 Hz |
| MAC | 640x480 | 66.67 Hz |
| MAC | 832x624 | 74.55 Hz |
| MAC | 1024x768 | 74.93 Hz |
| MAC | 1152x870 | 75 Hz |
| SVGA | 800x600 | 56, 60, 72, 75, 85 Hz |
| XGA | 1024x768 | 60, 70, 75, 85 Hz |
| SXGA | 1280x1024 | 60, 72 Hz |

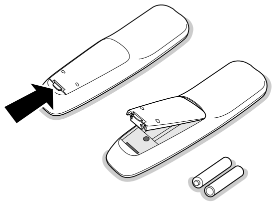
When a VGA computer is connected, the display selection is made automatically.

A message is displayed when the monitor does not support the connected VGA mode. Switch your computer to a correct display mode.

## Operation

❶ **Insert the mains plug** supplied into the mains inlet at the back of the monitor and in the wall socket.
*For safety, please, only use the supplied rim-earthed mains cord which has to be inserted in a grounded socket.*

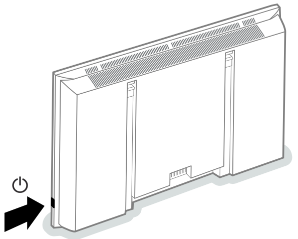
❷ **Remote control:** remove the cover of the battery compartment.
Insert the 2 batteries supplied (Type R6/AA-1.5V).



*The batteries supplied do not contain the heavy metals mercury and cadmium. Nevertheless in many countries batteries may not be disposed of with your household waste. Please check on how to dispose of batteries according to local regulations.*

❸ Make sure that your electronic receiver box and/or PC are switched on and that your PC is in the correct display mode.

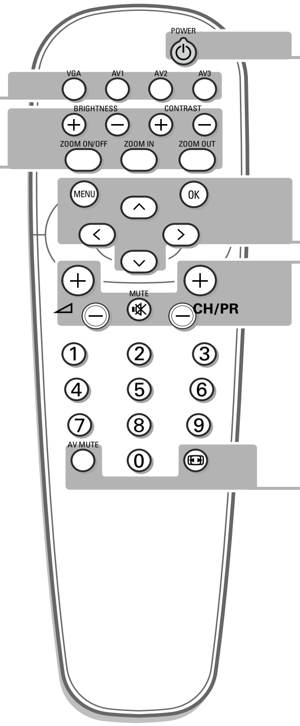
❹ **Switch the monitor on :** Press the on/off key ⏻ at the right side of the monitor.
A green indicator lights up and the screen comes on.



When the monitor does not receive a supported VGA signal and is not connected to a receiver box, the screen switches to standby and the red indicator lights up.

When you switch on your monitor **for the first time**, and the monitor is not connected to an electronic receiver box, the language menu automatically appears on the screen. The explanation appears in different languages one at a time.
Follow the instructions on screen to select the correct language or see Setup menu, Language, p. 5.

## Use of the remote control



**VGA** to select your computer connected to the **VGA 1** connector

**AV1**, **AV2**, **AV3** no function

**BRIGHTNESS +/-**
to adjust the brightness level of the picture

**CONTRAST +/-**
to adjust the contrast level of the picture

**ZOOM ON/OFF** to activate/de-activate the zoom function. See p. 4.

**ZOOM IN/OUT** to adjust the zoom factor and to change the magnification of the picture when zoom is activated. See p. 4.

⏻ to switch to standby or on again

**MENU** to switch the menu on/off

**cursor keys** to select your choice and to alter a selected adjustment.

**OK** to activate your choice

◿ press - or + to adjust the volume

🔇 **Mute key**
Temporarily mute the sound or restore it

**CH/PR Programme selection**
To browse through the sources selected.

**AV MUTE** to temporarily mute the picture and the sound or restore it.
When activated a yellow indicator starts blinking in front of the monitor.

⊡ **Picture format**
See Picture 2 menu, p. 4.

Press the ⊡ key to switch between the different picture formats.

If your monitor no longer responds to the remote control, the batteries may be exhausted.

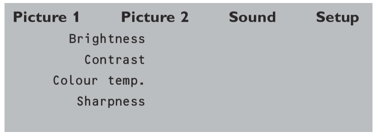
### How to dispose of batteries ?

The batteries supplied do not contain the heavy metals mercury and cadmium. Nevertheless in many countries batteries may not be disposed of with your household waste. Please ensure you dispose of batteries according to local regulations.

### End of life directives

Philips is paying a lot of attention to produce environmentally-friendly in green focal areas.
Your new monitor contains materials which can be recycled and reused.
At the end of its life specialised companies can dismantle the discarded monitor to concentrate the reusable materials and to minimise the amount of materials to be disposed of.
Please ensure you dispose of your old monitor according to local regulations.

## Use of the menus and the menu system



1. Press the **MENU** key on the remote control to summon the different menu headers.

2. Press the cursor left/right to move the cursor horizontally through the menu headers.

3. Press the cursor down to access the menu. In case of a slider, move the cursor left/right to adjust.
   In case of a list with options, move the cursor right to enter and use the cursor up/down to select an option.
   Press the cursor left to leave the options list.

4. Press the **MENU** key again to switch off the menu.

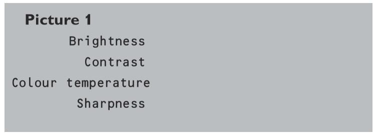
*Note: Sometimes not all the menu items are visible on the screen.*
*Press the cursor down until all the items are displayed.*

*Only when the US English language has been selected (see Setup menu,*
*Language, p. 5), the menu items will be displayed with additional icons.*

### Operation

Press the **MENU** key on the remote control to summon the main menu.

## Picture 1 menu



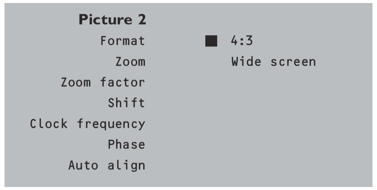
**Brightness**
This control allows you to adjust the brightness level of the picture.

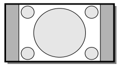
**Contrast**
This control allows you to adjust the contrast level of the picture.

**Colour temperature**
This control allows you to select the colour temperature of the picture.
Move the cursor up/down to make a selection.
Press the cursor left to return to the Picture 1 menu.

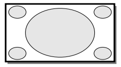
**Sharpness**
This control allows you to adjust the edge definition of a picture.

## Picture 2 menu





4:3



Wide screen

In this menu you are allowed to adjust attributes which are relevant for the picture on the display, like format, zoom, size, etc.

**Format**
Select **Format** to summon a list of **available** display formats for showing images in the traditional 4:3 proportions.
Press the cursor up/down to select another display format: 4:3 or Wide screen.

**Zoom**
Select **Zoom On** to activate the zoom function.
You may also activate the zoom function with the **ZOOM ON/OFF** key on the remote control.
Press the cursor left/right, up/down to select which part of the screen will be zoomed.

**Zoom factor**
Select **Zoom factor** and press the cursor left/right to adjust the zoom factor and to change the magnification of the picture.
If zoom is not active, Zoom Off, changing the magnification factor will have no effect on the displayed picture.

**Shift**
This control allows you, when necessary, to move the picture in a horizontal or vertical way.

1. Use the cursor left/right to adjust.
2. Press the **OK** key when done.

**Clock frequency**

This control allows you, when necessary, to adjust the values of the clock frequency so that especially text can be displayed with an optimal overall sharpness.

Use the cursor left/right to adjust.

**Phase**

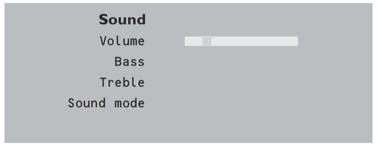
This control allows you, when necessary, to adjust the pixel phase of the picture to avoid picture interference.

Use the cursor left/right to adjust.

**Auto align**

This control allows you to automatically adjust the shift, the clock frequency and the phase in VGA mode.
Press **OK** to execute.

## Sound menu



**Volume**
This control allows you to adjust the volume level.

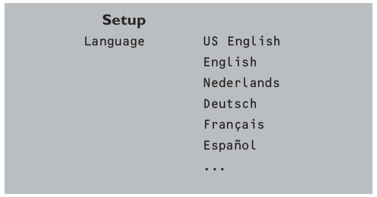
**Bass**
Bass attenuates or amplifies the low-frequency response of the sound of the loudspeakers.

**Treble**
Treble attenuates or amplifies the high-frequency response of the sound of the loudspeakers.

**Sound mode**
This control allows you to switch between mono and stereo sound.

*Note: Bass, Treble and Sound mode will not be available when an electronic receiver*
*box is connected to the monitor and a VGA source is selected.*

## Setup menu



1. Use the cursor down to select **Language**.
2. Press the cursor right to enter the list of

   selectable languages.
3. Use the cursor up/down to scroll through the list and to bring up other languages which are not displayed on the screen at present.

## Tips

### Ambient temperature

Do not hang up the monitor above a central heating or other heating sources.

### Care of the screen

Clean the anti-reflex coated flat glass screen with a slightly damp soft cloth. Do not use abrasives solvents as it can damage the glass surface of the screen.

### Plasma Display characteristics

**Caution**: A video source (such as a video game, DVD, or video information channel) which shows a constant non-moving pattern on the screen, can cause damage to the screen. When your Flat-Monitor is continuously used with such a source, the pattern of the non-moving portion of the game (DVD, etc.) could leave an image permanently on the screen. When not in use, turn the video source **OFF**.
Regularly alternate the use of such video sources with normal viewing.
When switching over to another picture after having displayed the same still picture for a long time (many hours), it may happen that some parts from the previous picture will remain on screen due to a kind of memory effect. This ghost picture will disappear after some time. To avoid this effect change the pictures regularly or for PC use you can turn on a screen saver in your computer.
For video signals, Philips has built in an automatic shift of the picture every 5 minutes to avoid this effect and to prolong the life of the screen.
Very incidentally and after a longer period of unuse (approx. 1 year) the screen may display some strange colour deficiencies. This is quite normal for plasma displays and these effects will disappear after the set has been turned on for some time.
A plasma display consists of a huge amount of colour pixels. It is within industry standards that very few pixels (< 0.001%) may be defective, even for a new set. There is however no reason to doubt about the quality of the set.
The plasma display technology operates with rare gases which are being influenced by air pressure.

Up to an altitude of 2000 m above sea-level (local air pressure equal or above 800 hPa), the display is functioning fine.
Operating the set at a higher altitude (lower air pressure), the picture becomes unstable and the picture performance is deteriorating. The plasma display might then also produce a humming sound. After bringing the set below 2000 m (local air pressure equal or above 800 hPa) it works fine again. Transportation has no influence.

### Control of peripheral equipment

The infrared signals of the screen may influence the reception sensitivity of other peripherals.
Solution: replace the batteries of the remote control or change position of other equipment. E.g. keep away a wireless headphone from within a radius of 1.5 m.

### No stable or not synchronised VGA picture

Check if you have selected the correct VGA mode in your PC.

### No picture or no sound

Are the supplied cables connected properly? (The power cable to the display, the VGA cables, the audio cables,...)
Is your PC or receiver box switched on?
Do you see a black screen and the indicator on front of the monitor lights up green, this means that the display mode is not supported.
Switch your VGA source to a correct mode.

**If your problem is not solved:** Switch your monitor off and then on again.
**Never attempt to repair a defective monitor yourself.** Check with your dealer or call a video technician.

### Transport

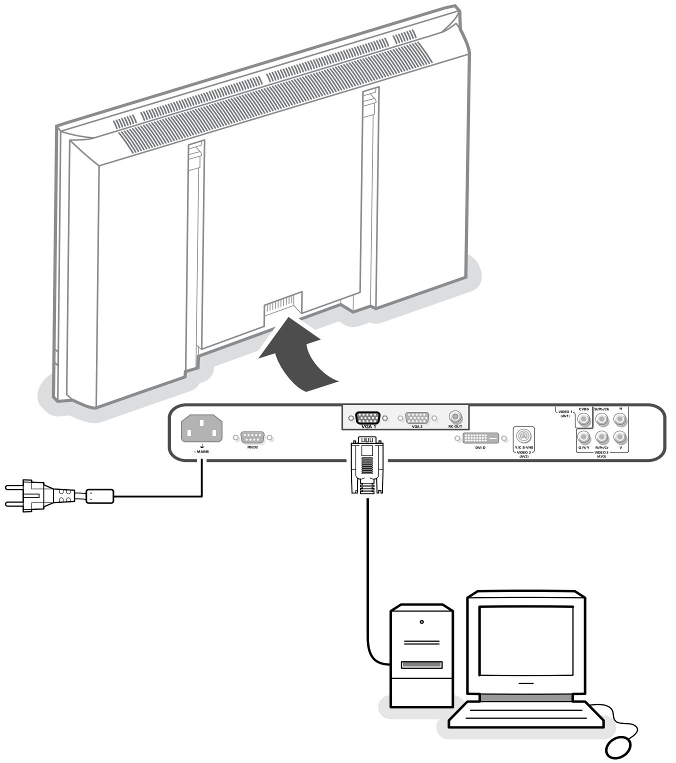
Keep the original packaging to transport the monitor if needed.

### Miscellaneous

. Ambient temperature:
  + 5 ~ + 40°C
. Maximum operating altitude:
  2000 m (min. air pressure
  800 hPa)
. Mains: Auto Voltage ranging from
  95V to 264V  50Hz/60Hz
. Power consumption:
  around 280 W (32"),
  300 W (37"), 380 W (42")
. Standby consumption: < 2 W
. Weight (excl. packaging)
  Display: 24 kg (32"),
  30 kg (37"),
  35,5 kg (42")
. Dimensions (wxhxd):
  Display:
  96.4 x 51.2 x 8.9 cm (32")
  106 x 58 x 9 cm (37")
  121 x 66 x 9cm (42")
. Wall mounting bracket included

## Personal Notes:

## 3.2 Speakerless



### Unpacking and wall mounting instructions

For the unpacking instructions follow the illustrated steps printed on the packaging (outside and inside). For the wall mounting instructions follow the illustrated steps ❹ to ❻ printed on the separate template.

Make sure that the wall mount is being fixed securely enough so that it meets safety standards. The weight of the monitor (excl. packaging) is about 35 kg.

*Note: Stands are optional accessories. Consult your dealer.*

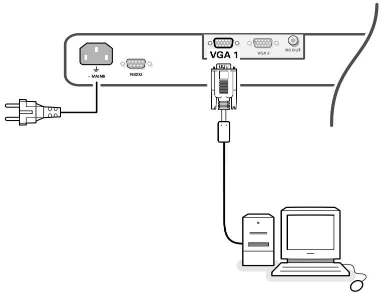
### Connect your computer

**Directly to the monitor**

❶ Connect one end of a VGA cable to the video card of the computer and the other end to the **VGA 1** connector at the rear side of the monitor. Fix the connectors firmly with the screws on the plug.

❷ In case of a multimedia computer, connect the audio cable to the audio outputs of your multimedia computer and to the audio inputs of your external amplifier.

*VGA 2: The video connector for VGA 2 can be programmed to become an input or an output via the Setup menu, see p. 6. The function of being input or output is determined by the used mode. If the monitor is used in video mode, the VGA 2 connector is VGA output. If the monitor is used in monitor mode, the connector is VGA input or output.*



**To an electronic receiver box**

See the handbook of the receiver box.

❶ Connect one end of a VGA cable to the video card of the computer and the other end to the **PC/MAC IN** connector at the rear side of the receiver box. Fix the connectors firmly with the screws on the plug.

❷ In case of a Multimedia computer, connect the audio cable to the audio outputs of your Multimedia computer and to the **AUDIO IN R** and **L** inputs of the receiver box. For sound reproduction, connect your external amplifier to the receiver box.

*Note: Only use the VGA cable supplied with the monitor.*

**Daisy chaining**

The Loop Through facility makes it possible to make a daisy chain with a second monitor.

Connect one end of another VGA cable to the **VGA 2** connector at the rear side of the monitor and the other end to the **VGA 1** connector of a second monitor.

*Note: The RC out jack next to the VGA 2 connector makes it possible to daisy chain remote control signals to other equipment. This output cannot be used to daisy chain a second monitor.*

## Computer Display modes

| | | |
|---|---|---|
| VGA | 640x480 | 60, 72, 75, 85 Hz |
| Wide VGA | 848x480 | 60 Hz |
| Wide VGA | 852x480 | 60 Hz |
| MAC | 640x480 | 66.67 Hz |
| MAC | 832x624 | 74.55 Hz |
| MAC | 1024x768 | 74.93 Hz |
| MAC | 1152x870 | 75 Hz |
| SVGA | 800x600 | 56, 60, 72, 75, 85 Hz |
| XGA | 1024x768 | 60, 70, 75, 85 Hz |
| SXGA | 1280x1024 | 60,<br>72 Hz (not with DVI-D-source) |

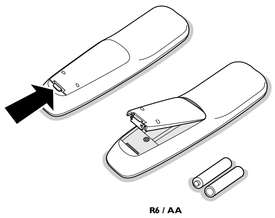
When a VGA computer is connected, the display selection is made automatically.

A message is displayed when the monitor does not support the connected VGA mode. Switch your computer to a correct display mode.

## Operation

❶ **Insert the mains plug** supplied into the mains inlet at the back of the monitor and in the wall socket. Please, only use the supplied rim-earthed mains cord which has to be inserted in a grounded socket.

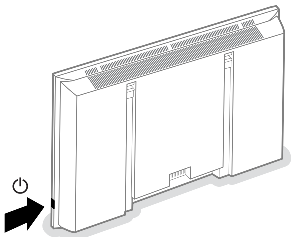
❷ Remote control: remove the cover of the battery compartment.
Insert the 2 batteries supplied (Type LR6/AA-1.5V).



*The batteries supplied do not contain the heavy metals mercury and cadmium. Nevertheless in many countries batteries may not be disposed of with your household waste. Please check on how to dispose of batteries according to local regulations.*

❸ Make sure that your receiver box and/or PC are switched on and that your PC is in the correct display mode.

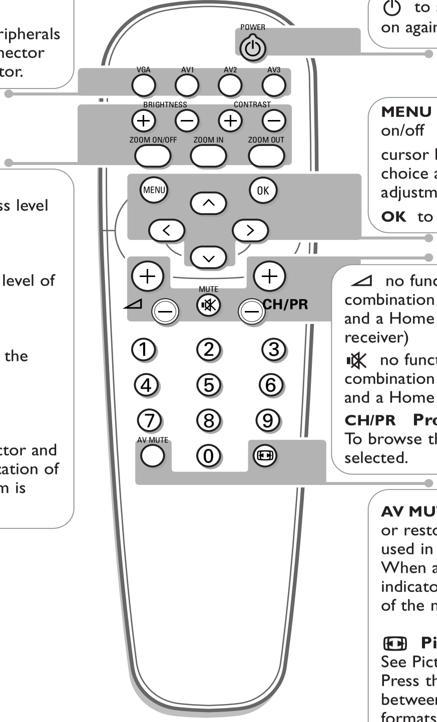
❹ **Switch the monitor on** : Press the power button ⏻ at the right side of the monitor. A green indicator lights up and the screen comes on.



When the monitor does not receive a supported VGA signal and is not connected to a receiver box the screen switches to standby and the red indicator lights up.

When you switch on your monitor for the first time, and the monitor is not connected to a receiver box, the menu language automatically appears on the screen. The explanation appears in different languages one at a time.
Follow the instructions on screen to select the correct language or see Setup menu, Language, p. 6.

## Use of the remote control



**VGA**
press repeatedly to select your computer connected to the **VGA 1** or **2** connector or to the **DVI-D** connector.

**AV1, AV2, AV3**
press to select the peripherals connected to the connector indicated on the monitor.

**BRIGHTNESS +/-**
to adjust the brightness level of the picture

**CONTRAST +/-**
to adjust the contrast level of the picture

**ZOOM ON/OFF**
to activate/de-activate the zoom function.
See p. 5.

**ZOOM IN/OUT**
to adjust the zoom factor and to change the magnification of the picture when zoom is activated. See p. 5.

⏻ to switch to standby or on again

**MENU** to switch the menu on/off

cursor buttons to select your choice and to alter a selected adjustment.

**OK** to activate your choice

◿ no function (except when in combination with a receiver box and a Home Cinema audio receiver)

🔇 no function (except when in combination with a receiver box and a Home Cinema audio receiver)

**CH/PR Program selection**
To browse through the sources selected.

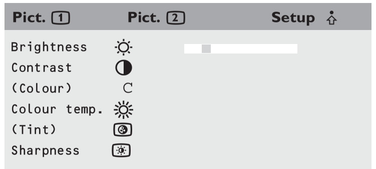
**AV MUTE** to mute the picture or restore it (if the monitor is used in monitor mode).
When activated a green indicator starts blinking in front of the monitor.

**⊡ Picture format**
See Picture 2 menu, p. 5.
Press the ⊡ key to switch between the different picture formats.

**On screen information**

When the monitor is used in the monitor mode, information about the active source (**AV1, AV2, AV3, VGA1, VGA2** or **DVI-D**) and the supported video, VGA or HD-format of the selected source is displayed on the screen together with the selected picture format and icons informing about AV mute.

## Use of the menus and the menu system


Pict. 1 | Pict. 2 | Setup

Brightness ☼
Contrast ◑
(Colour) C
Colour temp. ☼
(Tint)
Sharpness

1. Press the **MENU** key on the remote control to summon the different menu headers.
2. Press the cursor left/right to move the cursor horizontally through the menu headers.
3. Press the cursor down to access the menu.
   In case of a slider, move the cursor left/right to adjust.

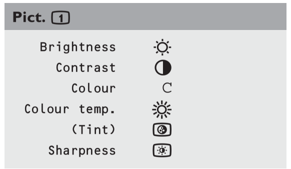
In case of a list with options, move the cursor right to enter and use the cursor up/down to select an option.
Press the cursor left to leave the options list.

4. Press the **MENU** key again to switch off the menu.

*Note: Sometimes not all the menu items are visible on the screen.*
*Press the cursor down until all the items are displayed.*

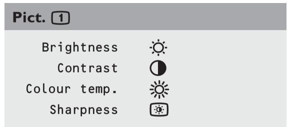
*Only when the US English language has been selected (see Setup menu,*
*Language, p. 6), the menu items will be displayed with additional icons.*

### SD video-mode


Pict. 1

Brightness ☼
Contrast ◑
Colour C
Colour temp. ☼
(Tint)
Sharpness

### VGA-mode + HD video mode


Pict. 1

Brightness ☼
Contrast ◑
Colour temp. ☼
Sharpness

### Operation

Press the **MENU** key on the remote control to sun the main menu.

### Picture 1 menu

**Brightness**
This control allows you to adjust the brightness level of the picture.

**Contrast**
This control allows you to adjust the contrast level of the picture.

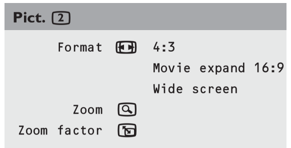
**Colour** *(only available when the source is* ***AV1***, ***AV2*** *or* ***AV3 YCbCr****)*
This control allows you to adjust the saturation level of the colours to suit your personal preference.

**Colour temperature**
This control allows you to select the Colour temperature of the picture.
Move the cursor up/down to make a selection.
Press the cursor left to return to the Picture 1 menu.

**Tint** *(only with NTSC signals and when the source is* ***AV1*** *or* ***AV2****)*
This control allows you to compensate for the Colour variations in NTSC encoded transmissions.

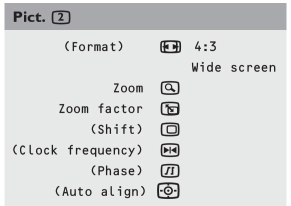
**Sharpness**
This control allows you to adjust the edge definition of a picture.

### SD video-mode


Pict. 2

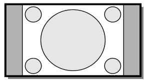
Format 4:3
Movie expand 16:9
Wide screen
Zoom
Zoom factor

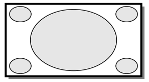
### VGA-mode + HD video mode


Pict. 2

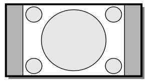
(Format) 4:3
Wide screen
Zoom
Zoom factor
(Shift)
(Clock frequency)
(Phase)
(Auto align)

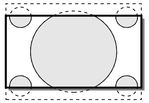
**4:3 VGA-mode**

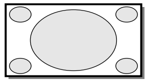

4:3


Wide screen

**SD video-mode**


4:3


Movie expand 16:9


Wide screen

### Picture 2 menu

**Format** *(only available in 4:3 VGA mode and SD video mode)*
Select **Format** to summon a list of **available** display formats.
Press the cursor up/down to select another display format: 4:3, Movie Expand 16:9 or Wide screen.

*Note: Movie Expand 16:9 is not available in VGA mode.*

**Zoom**
Select **Zoom On** to activate the zoom function.
You may also activate the zoom function with the **ZOOM ON/OFF** key on the remote control.
If no zoom is active, press the cursor left/right, up/down to select which part of the screen will be zoomed.

**Zoom factor**
Select **Zoom factor** and press the cursor left/right to adjust the zoom factor and to change the magnification of the picture.
If zoom is not active changing the magnification factor will have no effect on the displayed picture.

**Shift** *(only available in VGA mode on VGA 1 or VGA 2 and in one of the HD modes. See Connect Peripheral equipment, p. 7.)*

This control allows you, when necessary, to move the picture in a horizontal or vertical way.

1. Use the cursor left/right, up/down to adjust.
2. Press the **OK** key when done.

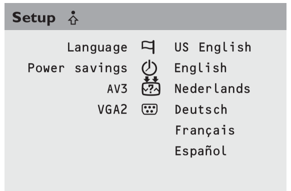
**Clock frequency** *(only available in VGA mode on VGA 1 or VGA 2. See Connect Peripheral equipment, p. 7.)*
This control allows you, when necessary, to adjust the values of the clock frequency so that especially text can be displayed with an optimal overall sharpness.
Use the cursor left/right to adjust.

**Phase** *(only available in VGA mode on VGA 1 or VGA 2. See Connect Peripheral equipment, p. 7.)*

This control allows you, when necessary, to adjust the pixel phase of the picture to avoid picture interference.
Use the cursor left/right to adjust.

**Auto align** *(only available in VGA mode on VGA1 or VGA2 and in one of the HD modes. See Connect Peripheral Equipment, p. 7.)*

This control allows you to automatically adjust the shift, the clock frequency and the phase in VGA mode and the shift in HD modes.
Press **OK** to execute.



## Setup menu

### Language

1. Use the cursor down to select **Language**.
2. Press the cursor right to enter the list of selectable languages.
3. Use the cursor up/down to scroll through the list and to bring up other languages which are not displayed on the screen at present.
*Note: Only with the US English language, the menu items will be displayed with additional icons.*

### Power savings

This control allows you to overrule the automatic power savings feature.
In case **Power savings** is switched **Off**, the power always remains on until the monitor is forced to standby.

1. Use the cursor down to select **Power savings**.
2. Press the cursor left/right to select **On** or **Off**.

### AV3

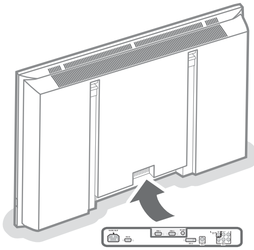
This control allows you to set the **AV3** input to HD-RGB, YCbCr or HD-YPbPr. When having selected **Auto**, the monitor makes the selection automatically between YCbCr, HD-YPbPr or HD-RGB.
See also p. 7, Equipment with Component Video Output connectors.

1. Use the cursor down to select **AV3**.
2. Press the cursor right to enter the list with options.
3. Press the cursor up/down to select one of the options.

### VGA 2

This control allows you to select whether to set the VGA 2 connector as input, output or even HD-input.

1. Use the cursor down to select **VGA 2**.
2. Press the cursor right to enter the list with options: **VGA IN, VGA OUT** or **HD IN.**
3. Press the cursor up/down to select one of the options.
*Note: AV3 and VGA 2 will not be available in VGA loop through mode, i.e. when a receiver box is connected to the monitor and a VGA source is selected.*

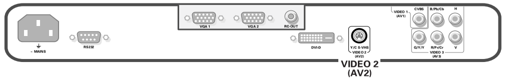


## Connect Peripheral Equipment

You may connect 3 possible VGA sources (**VGA 1**, **VGA 2** or **DVI-D**) and 3 possible video sources (**VIDEO 1 (AV1)**, **VIDEO 2 (AV2)** and **VIDEO 3 (AV3)**) to the monitor.
The following diagrams show you where you can connect your peripheral equipment.

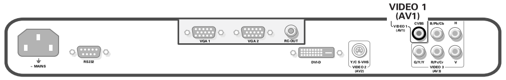
*Note: in case the monitor is operating in combination with a receiver box, the VGA and video inputs on the monitor will be disabled and the VGA 2 connector becomes an output.*

### Equipment with Y/C-SVHS output connectors



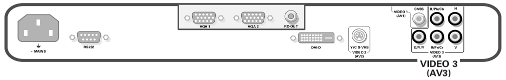
Connect the video cable to the **Y/C S-VHS VIDEO 2 (AV2)** connector.

### Equipment with CVBS output connectors



Connect the video cable to the **CVBS VIDEO 1 (AV1)** connector.

### Equipment with Component Video Output connectors



*Note: VIDEO 3 (AV3) can handle the following video signals: YCbCr, HD-PbPr and HD-RGB. The discrimination between the various input formats and the appropriate video processing is done automatically. It is however possible to overrule the automatic detection. See Setup menu, p. 6.*

1. Connect the video cables of your equipment with YPbPr output with composite sync on Y, or of your equipment with YCbCr output with composite sync on Y to the YPbPr, resp. YCbCr input **VIDEO 3 (AV3) IN** sockets of the monitor.
2. Connect the video cables of your equipment with RGB output with separate Horizontal and Vertical sync to the RGB input sockets and to the H and V sockets **VIDEO 3 (AV3)** of the monitor.

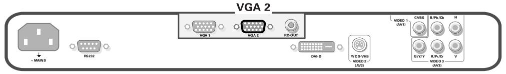
*Note: when High Definition signals are inputted to the monitor via the YPbPr/RGB input, the monitor switches to the HD Video Mode.*
*The following HD and ED video modes are supported by the monitor on the YPbPr, RGB and VGA 2 HD input:*

1920x1080/60I 720x480/60P
1280x720/60P 720x576/50P

*The following SD video modes are supported by the monitor on the YCbCr input:*

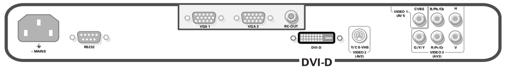
720x480/60I
720x576/50I

### High Definition equipment with VGA connector



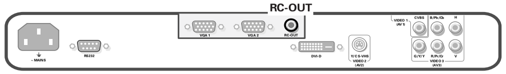
Connect the VGA output of your equipment to the **VGA2** connector.

### Digital DVI output of your PC (DVI-D)



Connect the Digital DVI output of your PC to the **DVI-D** connector.

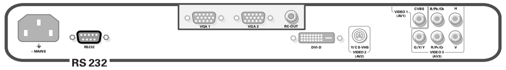
### RC out connector



This connector allows you to daisy chain remote control signals to other equipment (e.g. AV receiver, IR repeater) which have an electrical RC in.

*Note: it is not possible to daisy chain a second monitor.*

### Serial I/O port RS232



The RS232 connector is only to be used with the monitor as stand alone.
This connector allows you to control the monitor via your PC (as a replacement of the remote control).

*Note: This connector can also be used for dealer service tools.*

## Tips

**Ambient temperature**
Do not hang up the monitor above a central heating or other heating sources.

**Care of the screen**
Clean the anti-reflex coated flat glass screen with a slightly damp soft cloth. Do not use abrasives solvents as it can damage the glass surface of the screen.

**Plasma Display characteristics**
**Caution**: A video source (such as a video game, DVD, or video information channel) which shows a constant non-moving pattern on the monitor screen, can cause damage to the screen. When your Flat-Monitor is continuously used with such a source, the pattern of the non-moving portion of the game (DVD, etc.) could leave an image permanently on the screen. When not in use, turn the video source **OFF**.
Regularly alternate the use of such video sources with normal viewing.
When switching over to another picture after having displayed the same still picture for a long time (many hours), it may happen that some parts from the previous picture will remain on screen due to a kind of memory effect. This ghost picture will disappear after some time. To avoid this effect change the pictures regularly or for PC use you can turn on a screen saver in your computer.
Philips has built in an automatic shift of the picture in video mode every 5 minutes to avoid this effect and to prolong the life of the screen.
Very incidentally and after a longer period of unuse (approx. 1 year) the screen may display some strange colour deficiencies. This is quite normal for plasma displays and these effects will disappear after the set has been turned on for some time.
A plasma display consists of a high number of colour pixels. It is within industry standards that very few pixels (< 0.001%) may be defective, even for a new set. There is however no reason to doubt about the quality of the set.
The plasma display technology operates with rare gases which are being influenced by air pressure.
Up to an altitude of 2000 m above sea-level (local air pressure equal or above 800 hPa), the display is functioning fine. Operating the set at a higher altitude (lower air pressure), the picture becomes unstable and the picture performance is deteriorating. The plasma display might then also produce a humming sound. Bringing the set below 2000 m (local air pressure equal or above 800 hPa) it works fine again. Transportation has no influence.

**Control of peripheral equipment**
The infrared radiation of the screen may influence the reception sensitivity of other peripherals. Solution: replace the batteries of the remote control or change position of other equipment. E.g. keep away a wireless headphone from within a radius of 1,5 m.

**No stable or not synchronised VGA picture**
Check if you have selected the correct display mode in your PC. See p. 2, Computer display modes.

**No picture**
Are the supplied cables connected properly? (The power cable to the display, the VGA cables,...)
Is your PC switched on?
Do you see a black screen and the indicator in front of the monitor lights up green, this means that the display mode is not supported.
Switch your VGA source to a correct mode.

**Remote control**
If your monitor no longer responds to the remote control, the batteries may be exhausted.

**If your problem is not solved:**
Switch your monitor off and then on again.
**Never attempt to repair a defective monitor yourself.**
Check with your dealer or call a video technician.

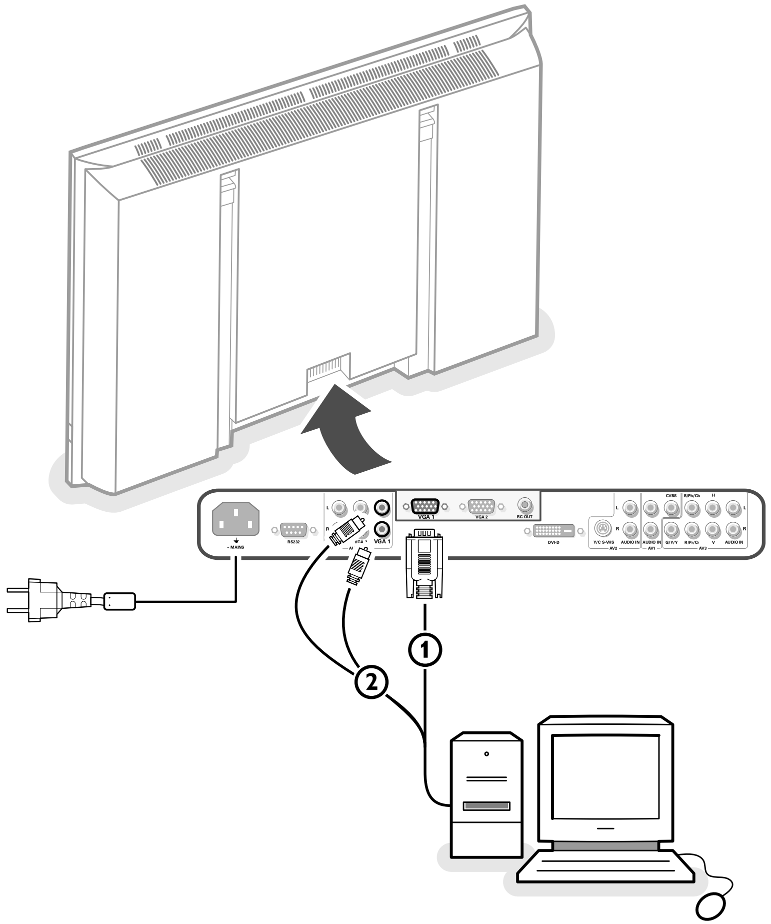
**Transport**
Keep the original packaging to transport the monitor if needed.

**End of life directives**
Philips is paying a lot of attention to produce environmentally-friendly in green focal areas. Your new monitor contains materials which can be recycled and reused.
At the end of its life specialised companies can dismantle the discarded monitor to concentrate the reusable materials and to minimise the amount of materials to be disposed of.
Please ensure you dispose of your old monitor according to local regulations.

**How to dispose of batteries?**
The batteries supplied do not contain the heavy metals mercury and cadmium. Nevertheless in many countries batteries may not be disposed of with your household waste. Please ensure you dispose of batteries according to local regulations.

**Miscellaneous**
. Ambient temperature: + 5~ + 40°C
. Maximum operating altitude: 2000 m /6562 ft (min. air pressure 800 hPa)
. Mains: AC 95-264V 50Hz/60Hz
. Power consumption: around 290W
. Standby consumption: < 2W
. Weight (excl. packaging) Display: 35 kg
. Dimensions (wxhxd): Display: 107 x 66 x 9 cm
. Wall mounting bracket included

## 3.3 Enhanced



### Unpacking and wall mounting instructions

For the unpacking instructions follow the illustrated steps printed on the packaging (outside and inside). For the wall mounting instructions follow the illustrated steps ❹ to ❻ printed on the separate template and in the supplied booklet.

Make sure that the wall mount is being fixed securely enough so that it meets safety standards. The weight of the monitor (excl. packaging) is about 53 Lbs or 79 Lbs, depending on the screen size (32" or 42").

*Note: stands are optional acccessories. Consult your dealer.*

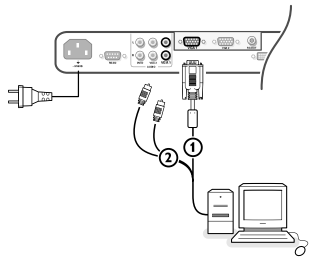
### Connect your computer

**Directly to the monitor**

❶ Connect one end of a VGA cable ① to the video card of the computer and the other end to the **VGA 1** connector at the rear side of the monitor. Fix the connectors firmly with the screws on the plug.

❷ In case of a Multimedia computer, connect the audio cable ② to the audio outputs of your Multimedia computer and to the **AUDIO VGA 1 R** (right) and **L** (left) inputs of the TV monitor.

*VGA 2: The video connector for VGA 2 can be programmed to become an input or an output via the Setup menu, see p. 8. The function of being input or output is determined by the used mode. If the monitor is used in TV mode, the VGA 2 connector is VGA output. If the monitor is used in monitor mode, the connector is VGA input or output.*



**To a TV receiver box**

See the handbook of the TV receiver box.

❶ Connect one end of a VGA cable to the video card of the computer and the other end to the **PC/MAC IN** connector at the rear side of the TV receiver box. Fix the connectors firmly with the screws on the plug.

❷ In case of a Multimedia computer, connect the audio cable to the audio outputs of your Multimedia computer and to the **AUDIO IN R** (right) and **L** (left) inputs of the TV receiver box.

*Note: Only use the VGA cable supplied with the monitor.*

**Daisy chaining**

The Loop Through facility makes it possible to make a daisy chain with a second monitor.

❸ Connect one end of another VGA cable to the **VGA 2** connector at the rear side of the monitor and the other end to the **VGA 1** connector of a second monitor.

❹ In case of a Multimedia computer, also connect audio cables to the **AUDIO L** and **R** outputs of the original monitor and to the **AUDIO L** and **R** inputs of the second monitor.

*The RC out jack next to the VGA 2 connector makes it possible to daisy chain remote control signals to other equipment.*
*This output cannot be used to daisy chain a second monitor.*

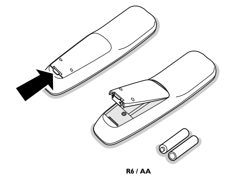
## Computer Display modes

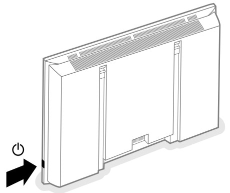
| | | |
|---|---|---|
| VGA | 640x480 | 60, 72, 75, 85 Hz |
| Wide VGA | 848x480 | 60 Hz |
| Wide VGA | 852x480 | 60 Hz |
| MAC | 640x480 | 66.67 Hz |
| MAC | 832x624 | 74.55 Hz |
| MAC | 1024x768 | 74.93 Hz |
| MAC | 1152x870 | 75 Hz |
| SVGA | 800x600 | 56, 60, 72, 75, 85 Hz |
| XGA | 1024x768 | 60, 70, 75, 85 Hz |
| SXGA | 1280x1024 | 60 Hz,<br>72 Hz (not with DVI-D source) |

When a VGA computer is connected, the display selection is made automatically.

A message is displayed when the monitor does not support the connected VGA mode. Switch your computer to a correct display mode.

## Operation





1. **Insert the mains plug** supplied into the mains inlet at the back of the monitor and in the wall socket. For safety, please, only use the supplied rim-earthed mains cord which has to be inserted in a grounded socket.

2. **Remote control:** remove the cover of the battery compartment. Insert the 2 batteries supplied (Type LR6/AA-1.5V). *The batteries supplied do not contain the heavy metals mercury and cadmium. Nevertheless in many countries batteries may not be disposed of with your household waste. Please check on how to dispose of batteries according to local regulations.*

3. Make sure that your TV receiver box and/or PC are switched on and that your PC is in the correct display mode.

4. **Switch the monitor on :** Press the power key ⏻ at the right side of the monitor.
A green indicator lights up and the screen comes on.
When the monitor does not receive a supported VGA signal and is not connected to a receiver box, the screen switches to standby and the red indicator lights up.

   When you switch on your monitor **for the first time**, and the monitor is not connected to a TV receiver box, the language menu automatically appears on the screen. The explanation appears in different languages one at a time.
   Follow the instructions on screen to select the correct language or see Setup menu, Language, p. 8.

## Use of the remote control

**VGA**
press repeatedly to select your computer connected to the **VGA 1** or **2** connector or to the **DVI-D** connector.

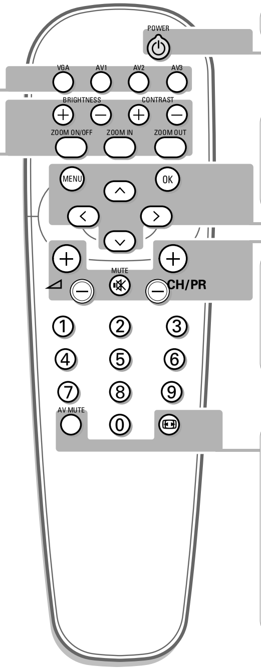
**AV1**, **AV2**, **AV3**
press to select the peripherals connected to the connector indicated on the monitor.

**BRIGHTNESS +/-**
to adjust the brightness level of the picture

**CONTRAST +/-**
to adjust the contrast level of the picture

**ZOOM ON/OFF**
to activate/de-activate the zoom function. See p. 7.

**ZOOM IN/OUT** to adjust the zoom factor and to change the magnification of the picture when zoom is activated. See p. 7.



⏻ to switch to standby or on again

**MENU** to switch the menu on/off
cursor buttons to select your choice and to alter a selected adjustment.

**OK** to activate your choice

◿ press - or + to adjust the volume

🔇 **Mute button**
Mute the sound or restore it

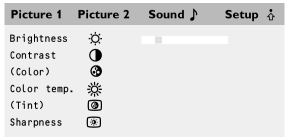
**CH/PR** **Program selection**
To browse through the sources selected.

**AV MUTE** to mute the picture and the sound or restore it (if the monitor is used in monitor mode).
When activated a green indicator starts blinking in front of the monitor.

⊡ **Picture format**
See Picture 2 menu, p. 7.
Press the ⊡ button to switch between the different picture formats.

**On screen information**
When the monitor is used in the monitor mode, information about the active source (**AV1**, **AV2**, **AV3**, **VGA1**, **VGA2** or **DVI-D**), and the supported video, VGA or HD-format of the selected source is displayed on the screen together with the selected picture format and icons informing about selected sound mode and AV or audio mute.

## Use of the menus and the menu system


Picture 1 Picture 2 Sound Setup
Brightness
Contrast
(Color)
Color temp.
(Tint)
Sharpness

1. Press the **MENU** button on the remote control to summon the different menu headers.
2. Press the cursor left/right to move the cursor horizontally through the menu headers.
3. Press the cursor down to access the menu.

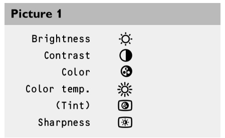
   In case of a slider, move the cursor left/right to adjust.

   In case of a list with options, move the cursor right to enter and use the cursor up/down to select an option.
   Press the cursor left to leave the options list.
4. Press the **MENU** button again to switch off the menu.

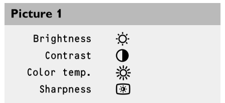
*Note: Sometimes not all the menu items are visible on the screen. Press the cursor down until all the items are displayed.*

*Only when the US English language has been selected (see Setup menu, Language, p. 8), the menu items will be displayed with additional icons.*

**SD video-mode**


Picture 1
Brightness
Contrast
Color
Color temp.
(Tint)
Sharpness

**VGA-mode + HD video mode**


Picture 1
Brightness
Contrast
Color temp.
Sharpness

## Operation

Press the **MENU** button on the remote control to summon the main menu.

### Picture 1 menu

**Brightness**
This control allows you to adjust the brightness level of the picture.

**Contrast**
This control allows you to adjust the contrast level of the picture.

**Color** *(only available when the source is* ***AV1, AV2*** *or* ***AV3 YCbCr****)*

This control allows you to adjust the saturation level of the colors to suit your personal preference.

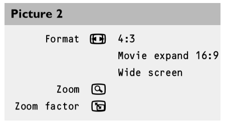
**Color temperature**
This control allows you to select the color temperature of the picture.
Move the cursor up/down to make a selection.
Press the cursor left to return to the Picture 1 menu.

**Tint** *(only with NTSC signals and when the source is* ***AV1*** *or* ***AV2****)*

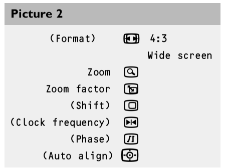
This control allows you to compensate for the color variations in NTSC encoded transmissions.

**Sharpness**
This control allows you to adjust the edge definition of a picture.

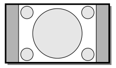
**SD video-mode**

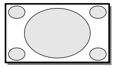

Picture 2
Format 4:3
Movie expand 16:9
Wide screen
Zoom
Zoom factor

**VGA-mode + HD video mode**

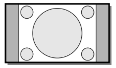

Picture 2
(Format) 4:3
Wide screen
Zoom
Zoom factor
(Shift)
(Clock frequency)
(Phase)
(Auto align)

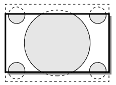
**4:3 VGA-mode**

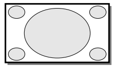

4:3


Wide screen

**SD video-mode**


4:3


Movie expand 16:9


Wide screen

### Picture 2 menu

**Zoom**

Select **Zoom On** to activate the zoom function.
You may also activate the zoom function with the **ZOOM ON/OFF** button on the remote control.
If no zoom is active, press the cursor left/right, up/down to select which part of the screen will be zoomed.

**Zoom factor**

Select **Zoom factor** and press the cursor left/right to adjust the zoom factor and to change the magnification of the picture.
If zoom is not active, changing the magnification factor will have no effect on the displayed picture.

**Format** *(only available in 4:3 VGA mode and SD video mode)*
Select **Format** to summon a list of **available** display formats.
Press the cursor up/down to select another display format: 4:3, Movie expand 16:9 or Wide screen.
*Note: Movie expand 16:9 is not available in VGA mode.*

**Shift** *(only available in VGA mode on VGA1 or VGA2 and in one of the HD modes. See Connect Peripheral Equipment, p. 9.)*

This control allows you, when necessary, to move the picture in a horizontal or vertical way.

1. Use the cursor left/right, up/down to adjust.
2. Press the **OK** button when done.

**Clock frequency** *(only available in VGA mode on VGA 1 or VGA 2. See Connect Peripheral equipment, p. 9.)*
This control allows you, when necessary, to adjust the values of the clock frequency so that especially text can be displayed with an optimal overall sharpness.

Use the cursor left/right to adjust.

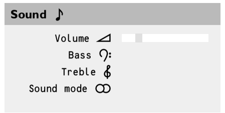
**Phase** *(only available in VGA mode on VGA 1 or VGA 2. See Connect Peripheral equipment, p. 9.)*

This control allows you, when necessary, to adjust the pixel phase of the picture to avoid picture interference.

Use the cursor left/right to adjust.

**Auto align** *(only available in VGA mode on VGA1 or VGA2 and in one of the HD modes. See Connect Peripheral Equipment, p. 9.)*

This control allows you to automatically adjust the shift, the clock frequency and the phase in VGA mode and the shift in HD modes.
Press **OK** to execute.



**Sound** ♪

Volume
Bass
Treble
Sound mode

## Sound menu

### Volume

This control allows you to adjust the volume level of the sound from the speakers.

### Bass

Bass attenuates or amplifies the low-frequency response of the sound from the loudspeakers.

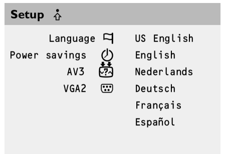
### Treble

Treble attenuates or amplifies the high-frequency response of the sound from the loudspeakers.

### Sound mode

This control allows you to switch between mono and stereo sound.

*Note: Bass, Treble and Sound mode will not be available in VGA loop through mode, i.e. when a TV receiver box is connected to the monitor and a VGA source is selected.*



**Setup**

| | |
|---|---|
| Language | US English |
| Power savings | English |
| AV3 | Nederlands |
| VGA2 | Deutsch |
| | Français |
| | Español |

## Setup menu

### Language

1. Use the cursor down to select **Language**.
2. Press the cursor right to enter the list of selectable languages.
3. Use the cursor up/down to scroll through the list and to bring up other languages which are not displayed on the screen at present.
   *Note: Only with the US English language, the menu items will be displayed with additional icons.*

### Power savings

This control allows you to overrule the automatic power savings feature.
In case **Power savings** is switched **Off**, the power always remains on until the monitor is forced to standby.

1. Use the cursor down to select **Power savings**.
2. Press the cursor left/right to select **On** or **Off**.

### AV3

This control allows you to set the AV3 input to HD-RGB, YCbCr or HD-YPbPr. When having selected **Auto**, the monitor makes the selection automatically between YCbCr, HD-YPbPr or HD-RGB.
See also p. 9, Equipment with Component Video Output connectors.

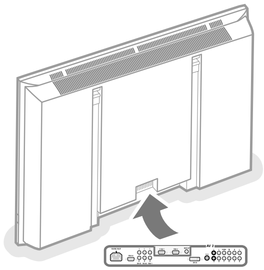
1. Use the cursor down to select **AV3**.
2. Press the cursor right to enter the list with options.
3. Press the cursor up/down to select one of the options.

### VGA2

This control allows you to select whether to set the VGA2 connector as input, output or even HD-input.

1. Use the cursor down to select **VGA2**.
2. Press the cursor right to enter the list with options: **VGA IN**, **VGA OUT** or **HD IN**.
3. Press the cursor up/down to select one of the options.
   *Note: AV3 and VGA2 will not be available in VGA loop through mode, i.e. when a TV receiver box is connected to the monitor and a VGA source is selected.*

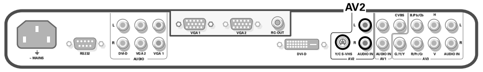
# Connect Peripheral Equipment



You may connect 3 possible VGA sources (**VGA1**, **VGA2** or **DVI-D**) and 3 possible video sources (**AV1**, **AV2** and **AV3**) to the monitor.
The following diagrams show you where you can connect your peripheral equipment.

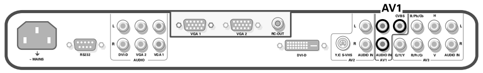
*Note: in case the monitor is operating in combination with a TV receiver box (TV mode), the AV inputs on the monitor will be disabled and the VGA2 connector becomes an output.*

### Equipment with Y/C-SVHS output connectors



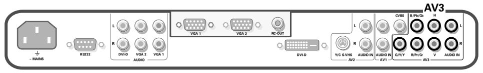
1. Connect the video cable to the **AV2** connector.
2. Connect the audio cables to the equipment's **AUDIO L** and **R** sockets and to the **AUDIO L** and **AUDIO R AV2** sockets on the monitor.

### Equipment with CVBS output connectors



1. Connect the video cable to the **AV1** connector.
2. Connect the audio cables to the equipment's **AUDIO L** and **R** sockets and to the **AUDIO L** and **R AV1** sockets on the monitor.

### Equipment with Component Video Output connectors



*Note: AV3 can handle the following video signals: YCbCr, HD-YPbPr and HD-RGB. The discrimination between the various input formats and the appropriate video processing is done automatically. It is however possible to overrule the automatic detection. See Setup menu, p. 8.*

1. Connect the video cables of your equipment with YPbPr output with composite sync on Y, or of your equipment with YCbCr output with composite sync on Y to the YPbPr, resp. YCbCr input **AV3 IN** sockets of the monitor.
2. Connect the video cables of your equipment with RGB output with separate Horizontal and Vertical sync to the RGB input sockets and to the H and V sockets **AV3** of the monitor.
3. Connect the audio cables to the equipment's **AUDIO L** and **R** sockets and to the **AUDIO IN L** and **AUDIO IN R AV3** sockets on the monitor.

*Note: when High Definition signals are inputted to the monitor via the YPbPr/RGB input, the monitor switches to the HD Video Mode.*

*The following HD and SD video modes are supported by the monitor on the YPbPr, RGB and VGA2 HD input:*

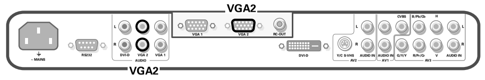
| | |
|---|---|
| 1920x1080/60I | 720x480/60P |
| 1280x720/60P | 720x576/50P |

*The following SD video modes are supported by the monitor on the YCbCr input:*

720x480/60I
720x576/50I

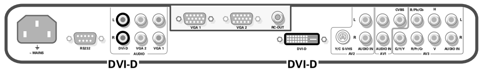
*Note: you should make the correct selection for AV3 in the Setup menu, p. 8.*

### High Definition equipment with VGA connector



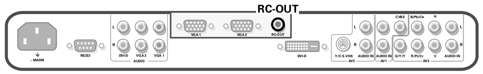
1. Connect the VGA output of your equipment to the **VGA2** connector.
2. Connect the audio cables to the equipment's **AUDIO L** and **R** sockets and to the **VGA2 AUDIO L** and **R** sockets on the monitor.
   *Note: you should select **HD IN** for **VGA2** in the Setup menu. (See p. 8.)*

### Digital DVI output of your PC (DVI-D)



1. Connect the Digital DVI output of your PC to the **DVI-D** connector.
2. Connect the audio cables to the **DVI-D AUDIO L** and **R** sockets on the monitor.

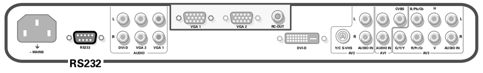
### RC out connector



This connector allows you to daisy chain remote control signals to other equipment (e.g. AV receiver, IR repeater) which have an electrical RC in.

*Note: it is not possible to daisy chain a second monitor.*

### Serial I/O port RS232



The RS232 connector is only to be used with the monitor as stand alone. This connector allows you to control the monitor via your PC (as a replacement of the remote control). **Software is supplied on CD-ROM**.

*Note: This connector can also be used for dealer service tools.*

**Supplied driver software**

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## Tips

### Ambient temperature

Do not hang up the monitor above a central heating or other heating sources.

### Care of the screen

Clean the anti-reflex coated flat glass screen with a slightly damp soft cloth. Do not use abrasives solvents as it can damage the glass surface of the screen.

### Plasma Display characteristics

**Caution**: A video source (such as a video game, DVD, or TV information channel) which shows a constant non-moving pattern on the TV screen, can cause damage to the screen. When your Flat-TV is continuously used with such a source, the pattern of the non-moving portion of the game (DVD, etc.) could leave an image permanently on the screen. When not in use, turn the video source **OFF**.
Regularly alternate the use of such video sources with normal TV viewing.

When switching over to another picture after having displayed the same still picture for a long time (many hours), it may happen that some parts from the previous picture will remain on screen due to a kind of memory effect. This ghost picture will disappear after some time. To avoid this effect change the pictures regularly or for PC use you can turn on a screen saver in your computer.
Philips has built in an automatic shift of the picture in video mode every 5 minutes to decrease this effect and to prolong the life of the screen.
Very incidentally and after a longer period of unuse (approx. 1 year) the screen may display some strange color deficiencies. This is quite normal for plasma displays and these effects will disappear after the set has been turned on for some time.
A plasma display consists of more than 3.1 Million color pixels. It is within industry standards that very few pixels (< 0.001%) may be defective, even for a new set. There is however no reason to doubt about the quality of the set.
The plasma display technology operates with rare gases which are being influenced by air pressure.
Up to an altitude of 6562 ft above sea-level, the display is functioning fine. Operating the set at a higher altitude, the picture becomes unstable and the picture performance is deteriorating. After bringing the set below 6562 ft it works fine again. Transportation has no influence.

### Control of peripheral equipment

The infrared radiation of the screen may influence the reception sensitivity of other peripherals. Solution: replace the batteries of the remote control or change position of other equipment. E.g. keep away a wireless headphone from within a radius of 4.92 ft.

### No stable or not synchronized VGA picture

Check if you have selected the correct display mode in your PC. See p.4, Computer display modes.

### No picture or no sound

Are the supplied cables connected properly? (The power cable to the display, the VGA cables, the audio cables,...)
Is your PC switched on?
Do you see a black screen and the indicator in front of the monitor lights up green, this means that the display mode is not supported.
Switch your VGA source to a correct mode.

### Remote control

If your monitor no longer responds to the remote control, the batteries may be exhausted.

**If your problem is not solved:**
Switch your monitor off and then on again.
**Never attempt to repair a defective monitor yourself.**
Check with your dealer or call a TV technician.

### Transport

Keep the original packaging to transport the monitor if needed.

### End of life directives

Philips is paying a lot of attention to produce environmentally-friendly in green focal areas. Your new monitor contains materials which can be recycled and reused.
At the end of its life specialized companies can dismantle the discarded monitor to concentrate the reusable materials and to minimize the amount of materials to be disposed of.
Please ensure you dispose of your old monitor according to local regulations.

### How to dispose of batteries ?

The batteries supplied do not contain the heavy metals mercury and cadmium. Nevertheless in many countries batteries may not be disposed of with your household waste. Please ensure you dispose of batteries according to local regulations.

### Miscellaneous

. Ambient temperature: + 5~ + 40°C
. Maximum operating altitude:
  2000 m/6562 ft (min. pressure 800h Pa)
. Mains: AC 95-264V 50/60 Hz
. Power consumption:
  ± 250 W (32") or ± 320 W (42")
. Standby consumption: < 2 W
. Weight (excl. packaging)
  Display: 53 (32") or 79 (42") Lbs
. Dimensions (wxhxd):
  Display: 38 x 20,2 x 3,5 inch (32")
  or 47,8 x 25,9 x 3,5 inch (42")
. Wall mounting bracket included

*If this instruction manual does not give an answer or if 'Tips' do not solve your TV problem, you can call your Local Philips Customer or Service Center. See the supplied World-wide guarantee booklet.*
*Please, have the Model and Product number which you can find at the back of your television set or on the packaging, ready, before calling the Philips helpline (800-531-0039).*

# 4. Mechanical Instructions

Index of this chapter:

- Service Positions Monitor
- Rear Cover Removal
- Service Position Panels
- PDP and Glass Plate Replacement
- Re-assembly

**Note:** Figures below can deviate from the actual situation, due to different set executions.

## 4.1 Service Positions Monitor

### 4.1.1 Transport Cushions

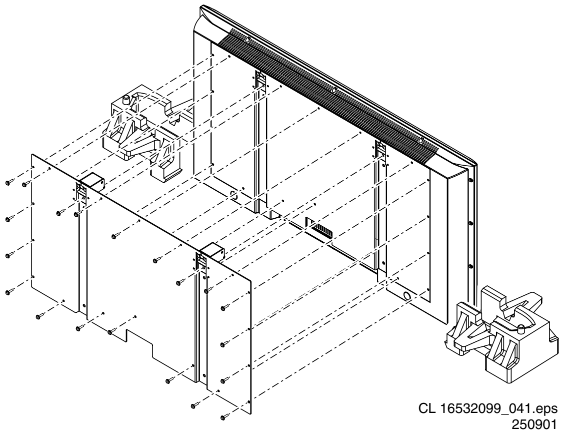
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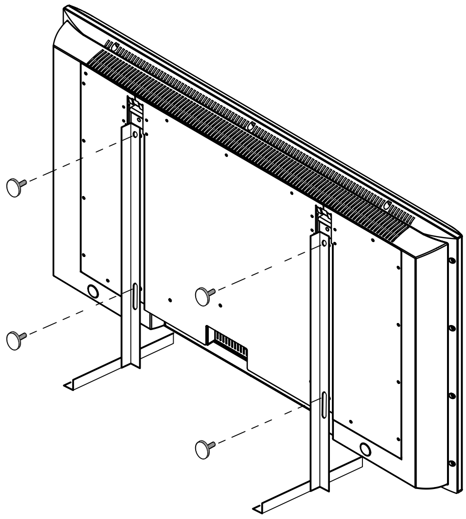
Figure 4-1 Transport cushions

First, put the monitor in its service position. Therefore, disconnect all cables connected to the monitor and take the monitor of the wall (or tabletop stand). Then, place the monitor in the re-enforced transport cushions that function also as service stand (you can order them separately under code 3122 126 40612). See figure "Transport cushions".

**Notes:**

- There are no special "re-enforced service stands". The cushions used in the factory packaging are already made of reinforced material.
- Always keep in mind that the stands are only designed to keep the monitor in service position as long as the monitor is being serviced. The stands are NOT designed to keep the monitor in the upright position for more then two days.
- After the monitor is serviced, or when nobody is working on the monitor (e.g. in the weekend), it should be removed from the stands and laid down on a cushion or other support system to prevent it from falling.
- Worn out stands should be replaced by new ones (monitor will tilt to much forward).
- Never leave the monitor alone when the stands are not fully pressed on its place.
- It is possible to move the right stand a bit to the right so that you can access the IR-LED and ON/OFF switch, but the monitor can then not be left alone because the stands are NOT designed to carry the weight of the monitor in that position. A better solution to access the IR-LED and/or ON/OFF switch is to make some holes in the stands at the position of the LED and switch. Do not make the holes to big, as this will influence the strength of the stands.

### 4.1.2 Aluminium Stand: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040703

Figure 4-2 Aluminium stand

The aluminium stand (order code 3122 785 90480) can be mounted with the back cover removed or still left on. So, the stand can be used to store products or to do measurements. It is also very suitable to perform duration tests without taking much space, without having the risk of overheating and no risk of products falling. The stand can be mounted and removed quickly and easy with use of the delivered screws that can be tightened and loosened manually without the use of tools. See figure above.

**Note:** Only use the delivered screws to mount the monitor to the stand.

### 4.1.3 Foam Stand:

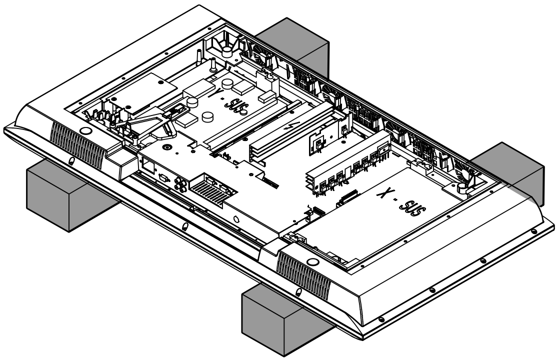
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Figure 4-3 Foam stand

The foam stand (order code 3122 785 90580) can be used for all types and sizes of FTVs and LCD TVs and can even be used to e.g. exchange a CRT of a normal TV. By laying the plasma or LCD TV flat on the (ESD protective) foam bars, a stable situation is created to perform measurements and alignments. See figure "Foam stand".
By first placing a mirror flat on the table under the TV you can easily see if something is happening on the screen. The stand is also handy to replace the screen (PDP or LCD).

## 4.2 Rear Cover Removal

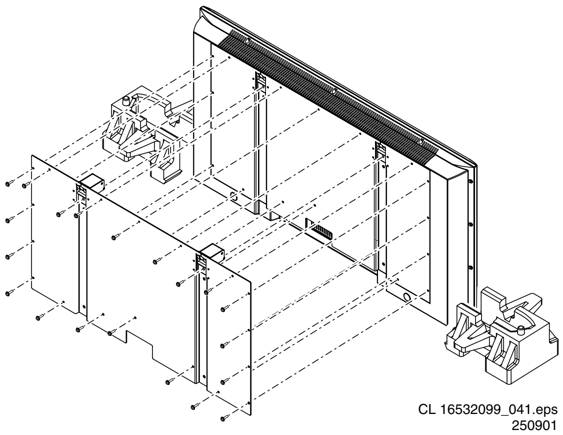

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**Figure 4-4 Rear cover removal**

To be able to access or measure the panels, remove the rear cover (metal back plate):

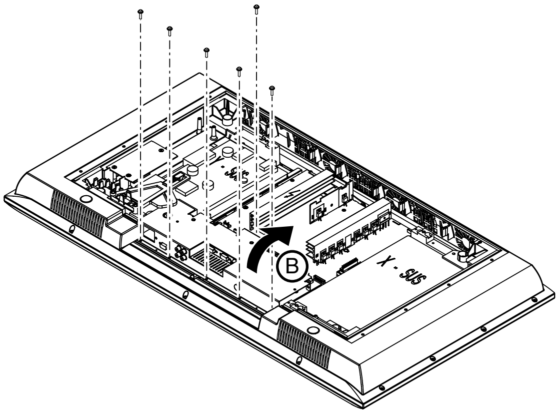
1. Remove all fixation screws from the back plate, as indicated in figure above (the amount of screws that need to be removed differs from the amount in the figure above).
2. Remove the metal back plate. Make sure that wires and flat foils are not damaged during plate removal.

**Warning:** make sure that the mains power is disconnected when you remove the metal back plate.

## 4.3 Service Position Panels

### 4.3.1 SCAVIO Panel

***Solder-side SCAVIO***



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200901

**Figure 4-5 Service position SCAVIO (1)**

To access the panel:

1. Remove the cables from connectors 0301, 0305, 0320, 0319, and 0388 to the SCAVIO panel.
2. Remove the power cable from the mains power inlet to the power supply (connector 0308).
3. Remove all screws at the bottom.
4. Hold the panel while removing the top screw, in order to prevent that the panel will drop.
5. Take the panel out, and turn it 180 degrees, so that you face the solder side of the SCAVIO panel.
6. Reconnect all cables. Use a standard power cable to connect the mains directly to PSU-connector 0308, and use the 'LED/Switch panel' service kit 3122 785 90410 (as the original cable is too short).

**Caution:** When measuring, watch out for the 'hot' left heat sink of the PSU!

Another way to measure the SCAVIO panel:

1. Remove all screws at the bottom.
2. Hold the panel while removing the top screw, in order to prevent that the panel will drop.
3. Put a piece of paper (or cardboard) in front of the Power Supply.
4. Take the panel out, and turn it upward [B], so that you face the solder-side of the SCAVIO panel.

**Caution:** Make sure that the metal connector plate does not touch any 'hot' part of the Power Supply (heatsink).

***Component-side SCAVIO***

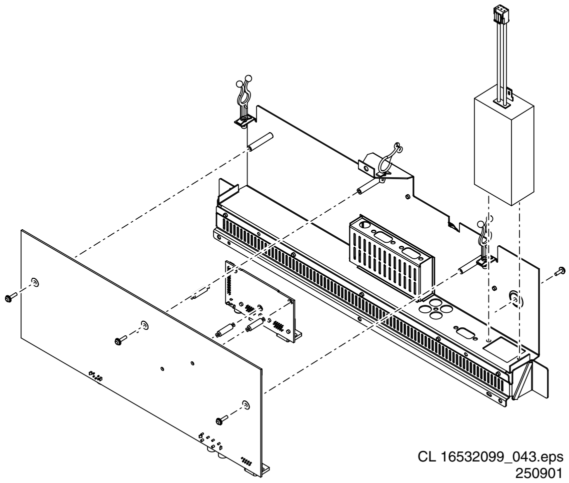

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**Figure 4-6 Service position SCAVIO (2)**

To access the other side of the SCAVIO panel:

1. Disconnect all cables going to the SCAVIO panel.
2. Remove all screws at the connectors of the connector plate, see figure 'Solder-side SCAVIO'.
3. Remove all fixation screws that connect the SCAVIO panel to the connector plate, see figure 'Component-side SCAVIO'.
4. Reconnect the SCAVIO panel, be careful: do not make a short-circuit!

### 4.3.2 VGA Connector Panel

To remove the VGA Connector Panel:

1. Squeeze the three plastic pins that connect this panel to the SCAVIO board, while you pull it carefully upwards.
2. Unplug the flat cable.

### 4.3.3 Power Supply Panel

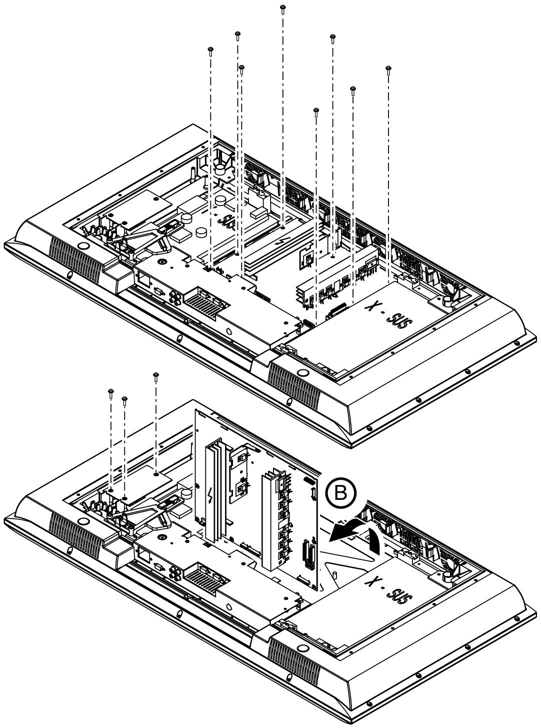

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Figure 4-7 Service Position Power Supply

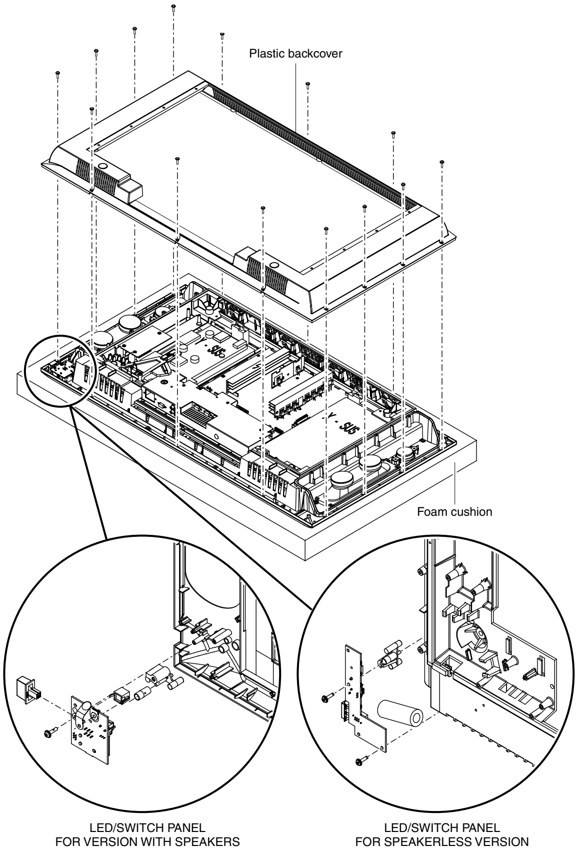
It is possible to perform most measurements from the component level side (thus, how the panel is mounted in the set). However, to reach the copper-side of the Power Supply:

1. Unplug the power.
2. Remove all fixation screws from the Power Supply.
3. Hinge the Power Supply forward, so that you can reach the copper-side. Use a non-conducting part underneath, to support the PWB (e.g. a carton box).
   **Caution:** make sure that, when you hinge the Power Supply forward, you do not damage the cables. Pay special attention to the flat cable (on connector 0307) and the cable on connector 0306, because they can be easily damaged by the sharp edge of the connector plate.
4. To remove the Power Supply, unplug all cables.
5. Remove the Power Supply.

### 4.3.4 Audio Amplifier Panel

The solder-side of this panel is directly accessible. To access the component-side, or to remove the whole panel, unscrew the three fixation screws (see figure 'Power Supply Panel'), and (re)move the panel.

### 4.3.5 LED/Switch Panel and Speakers



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300603

Figure 4-8 Service Position LED/Switch Panel and Speakers

To access or replace the LED/Switch panel and/or speakers:

1. Take the monitor from its service stand, and put it (face down) on a soft surface (blanket, foam cushion or foam stand), to make sure that you do not damage the front glass plate.
2. Unscrew all fixation screws of the plastic back cover.
3. Lift and remove the plastic back cover.
4. You can access now the LED/Switch panel and/or the speakers.

### 4.3.6 LED/Switch panel

To measure the component-side, or to remove the LED/Switch panel, unscrew one fixation screw (see enlarged part of figure 'LED/Switch Panel and Speakers'), and remove the panel.

### 4.3.7 Loudspeakers

As soon as you have removed the plastic back cover, you must replace the speaker-box sealing foams (12nc: 3122 358 76221). This, to ensure that the loudspeakers are airtight.
Do not stretch the foam during mounting. Pay special attention to the corners, to make sure that the foam is not stretched and that it is pushed in the corners.

## 4.4 PDP and Glass Plate Replacement

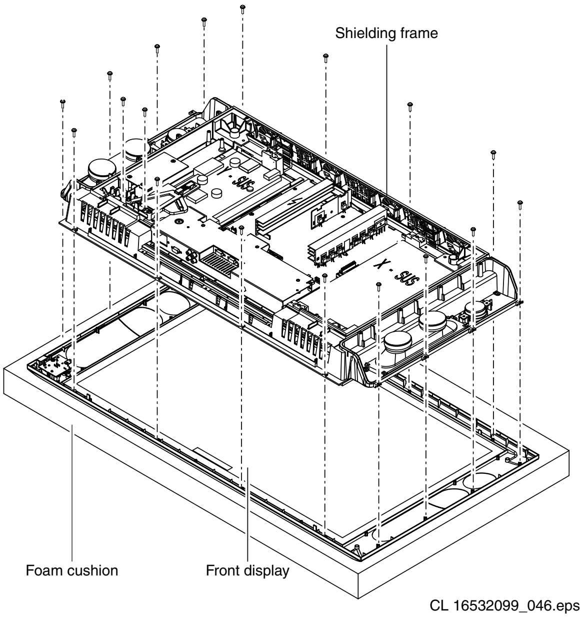

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**Figure 4-9 Exchanging the glass plate**

Exchanging the glass plate

1. Take the monitor from its service stand, and put it (face down) on a soft surface (blanket, foam cushion or foam stand), to make sure that you do not damage the front glass plate.
2. Remove the metal back plate as described in paragraph 'Rear Cover Removal'.
3. Unscrew all fixation screws of the plastic back cover.
4. Lift and remove the plastic back cover.
5. If the triangular shaped cable holder at the left bottom is present, unscrew the fixation screws of the holder at the left bottom, see figure 'Exchange Glass Plate'.
6. Unplug the cable of the LED/Switch panel, connector 0320
7. If the ESM Filter Panel at the left bottom is present, unscrew the fixation screws.
8. Unscrew all fixation screws of the (metallised) shielding frame, see figure 'Exchange Glass Plate'.
9. You can now remove the (metallised) shielding frame, together with the PDP, Audio panel, Power supply and SCAVIO panel attached to it, see figure 'Exchange Glass Plate'.
   **Note:** To prevent scratches, make sure to put the shielding frame together with the PDP on a soft surface.
10. Replace the glass plate.

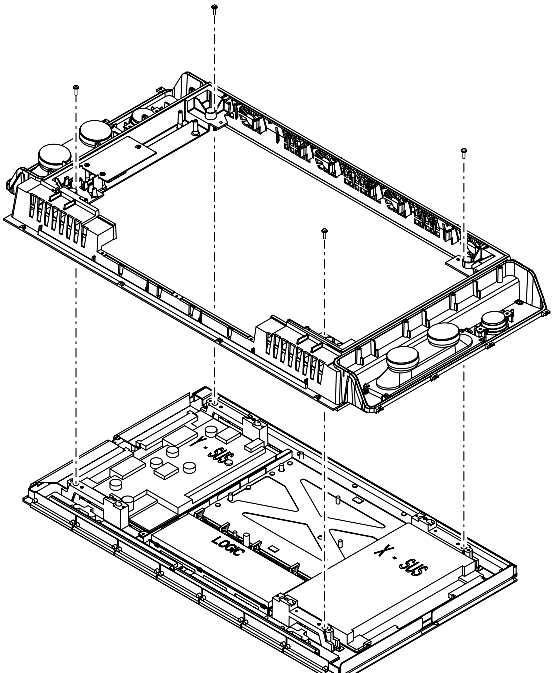

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**Figure 4-10 Exchanging the PDP**

To exchange the PDP panel:

1. Take out the SCAVIO panel and Power Supply panel, as described earlier.
2. Unscrew all fixation screws of the (metallised) shielding frame (two at the top and two at the bottom, see figure 'Exchange PDP').
3. The shielding frame can now be taken off the PDP.
4. Replace the PDP.

## 4.5 Re-assembly

To re-assemble the whole set, do all processes in reverse order.

**Notes:**

- You must replace the speaker-box sealing foam, in case the plastic rear cover has been (re)moved.
- While re-assembling, make sure all the cables are in their original position and make sure all the EMC foams are present to ensure 'EMC tightness'.

# 5. Service Modes, Error Codes, and Fault Finding

Index of this chapter:
1. Test points
2. Service Modes
3. Problems and Solving Tips (related to CSM)
4. ComPair
5. Error Codes
6. The Blinking LED Procedure
7. Protections
8. Repair Tips

## 5.1 Test Points

The chassis is equipped with test points (I- and F-points) printed on the circuit board assemblies. See test point overview in chapter 6.

Perform measurements under the following conditions:
- Service Default Mode.
- Video: colour bar signal (via PC or VGA-generator).
- Audio: 1 kHz, 2 V_pp (via PC or VGA-generator).

## 5.2 Service Modes

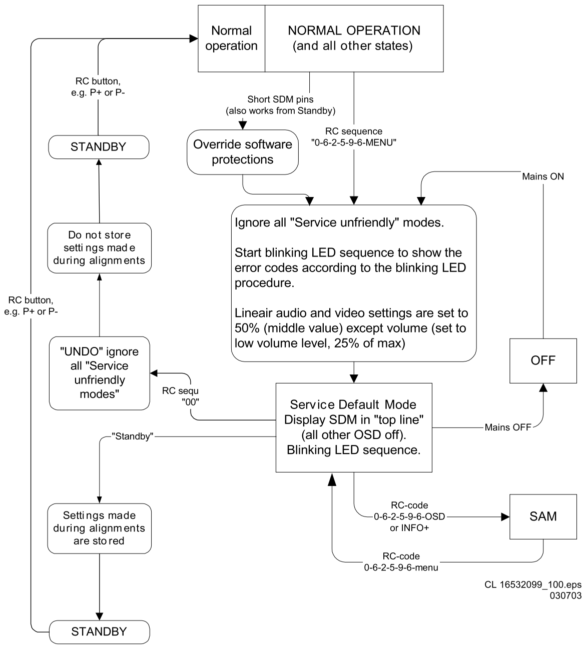
Service Default Mode (SDM) and Service Alignment Mode (SAM) offer several features for the service technician, while the Customer Service Mode (CSM) is used for communication between a Philips Customer Care Centre (P3C) and a customer.

There is also the option of using ComPair, a hardware interface between a computer (see requirements) and the FTV chassis. It offers the ability of structured troubleshooting, test pattern generation, error code reading, software version readout, and software upgrading.
*Minimum* requirements: a Pentium Processor, Windows 9x/NT/2000/XP, and a CD-ROM drive (see also paragraph 5.4).

### 5.2.1 Service Default Mode (SDM)

***Purpose***
- To create a pre-defined setting to get the same measurement results as given in this manual.
- To override SW protections (only when SDM is entered via the "service pins" on connector 0382).
- To start the blinking LED procedure.

***Specifications***
- All picture settings at 50% (brightness, contrast, etc.).
- Colour temperature is set to "normal".
- Bass, treble and balance at 50%; volume at 25%.
- All service-unfriendly modes (if present) are disabled, like:
- Video blanking,
- Slow de-mute,
- Anti ageing,
- Automatic switch to Standby when no sync signals are received.


Normal operation
NORMAL OPERATION (and all other states)
RC button, e.g. P+ or P-
Short SDM pins (also works from Standby)
RC sequence "0-6-2-5-9-6-MENU"
STANDBY
Override software protections
Mains ON
Ignore all "Service unfriendly" modes.
Start blinking LED sequence to show the error codes according to the blinking LED procedure.
Lineair audio and video settings are set to 50% (middle value) except volume (set to low volume level, 25% of max)
Do not store settings made during alignments
RC button, e.g. P+ or P-
"UNDO" ignore all "Service unfriendly modes"
RC sequ "00"
OFF
Service Default Mode Display SDM in "top line" (all other OSD off). Blinking LED sequence.
Mains OFF
"Standby"
Settings made during alignments are stored
RC-code 0-6-2-5-9-6-OSD or INFO+
SAM
RC-code 0-6-2-5-9-6-menu
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STANDBY

**Figure 5-1 CL1SDM Flowchart**

***How to enter SDM***
Use one of the following methods:
- Use the standard RC-transmitter and key in the code **062596**, directly followed by the **MENU** button.
- Short jumpers 1 and 2 of connector 0382 on the SCAVIO panel.

After entering SDM, a blank screen is visible, with SDM in the upper left side for recognition. The Blinking LED procedure is started and will indicate any possible errors via the (orange) front LED.

***How to navigate***
To toggle to the SAM mode, use a standard customer RC-transmitter and key in the code **062596**, directly followed by the **OSD (i+)** key.

***How to exit***
Use one of the following methods (the set returns to its last status):
- Switch the set to STANDBY by pressing the power button on the remote control transmitter (if you switch the set "off" by removing the Mains power, the set will return in SDM, when the Mains power is re-applied).
- Use the standard RC-transmitter and key in the code **00**.

### 5.2.2 Service Alignment Mode (SAM)

***Purpose***
- To perform (software) alignments.
- Easy way to identify the commercial type number of the set.
- Easy identification of the used software versions.
- To display (or clear) the error code buffer.
- View operational hours.

***Specifications***
- Operation hours counter.
- Software version reading.
- Error buffer reading and erasing.
- Software alignments.
- Test pattern generation.

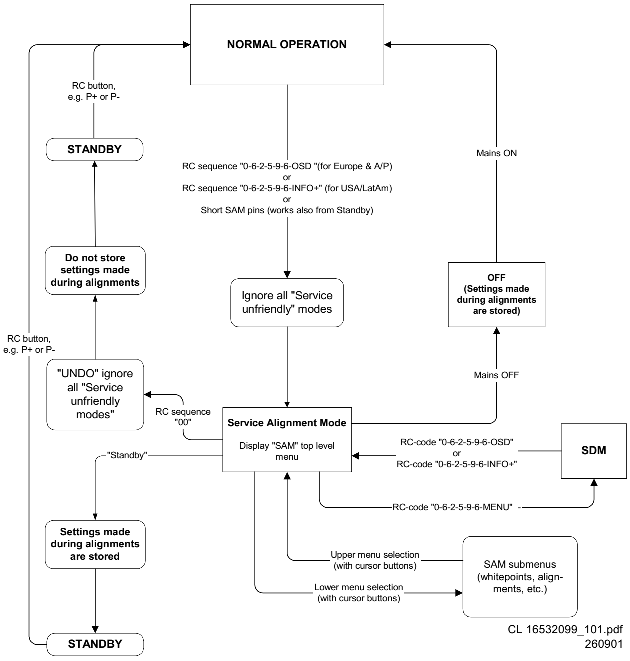
NORMAL OPERATION
RC button,
e.g. P+ or P-
STANDBY
RC sequence "0-6-2-5-9-6-OSD "(for Europe & A/P)
or
RC sequence "0-6-2-5-9-6-INFO+" (for USA/LatAm)
or
Short SAM pins (works also from Standby)
Mains ON
Do not store settings made during alignments
Ignore all "Service unfriendly" modes
OFF (Settings made during alignments are stored)
RC button,
e.g. P+ or P-
"UNDO" ignore all "Service unfriendly modes"
Mains OFF
RC sequence "00"
Service Alignment Mode
Display "SAM" top level menu
RC-code "0-6-2-5-9-6-OSD"
or
RC-code "0-6-2-5-9-6-INFO+"
SDM
"Standby"
RC-code "0-6-2-5-9-6-MENU"
Settings made during alignments are stored
Upper menu selection (with cursor buttons)
Lower menu selection (with cursor buttons)
SAM submenus (whitepoints, alignments, etc.)
STANDBY

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**Figure 5-2 SAM Flowchart**

#### *How to enter*

Use one of the following methods:

- Use a standard RC-transmitter and key in the code **062596** directly followed by the **OSD (i+)** button.
  **Note:** the OSD (i+) is not available on the original FTV remote control; therefore use another Philips remote control (e.g. MG, EMG or A10).
- Short jumpers 3 and 4 of connector 0382 on the SCAVIO panel.

The following screen is visible:

**Table 5-1 SAM Menu "General"**

| Service Alignment Menu | General |
|---:|---|
| Type Nr. - AG Code | 32FD9944/01S (example) |
| SW Version OTC | AAAABC-X.Y_xxxxx |
| SW Version PW | AAAABC-X.Y_xxxxx |
| SW Version EPLD | AAAABC-X.Y_xxxxx |
| Errors 1 | xx xx xx xx xx |
| Errors 2 | xx xx xx xx xx |
| Operational hours | xx |
| Reset error buffer | Press OK to reset |
| Store | Press OK to store |

1. **TYPE NR.** Gives the commercial type number of the monitor, e.g. 32FD9944/01S.
2. **AG CODE.** Is not implemented.
3. **SW VERSION OTC** (AAAABC-X.Y-xxxxx).
   **Note:** You will find details of the latest software versions in the chapter "Software Survey" of the "Product Survey - Colour Television" publication, which is published four times each year.
   - A = the chassis name (FM23 for **all** displays).
   - B = the region (E= Europe, A= Asia Pacific, U= NAFTA, L= LATAM or G = Global).
   - C = the configuration name (B= Basic, E= Enhanced).
   - X = the main software version number.
   - Y = the sub software version number.
   - x = last five digits of 12nc code.
4. **SW VERSION PW** (AAAABC-X.Y-xxxxx). See description above.
5. **SW VERSION EPLD** (AAAABC-X.Y-xxxxx). See description above.
6. **ERRORS 1.** Gives the last five errors of the error buffer. The last detected error is displayed at the most left position. The errors are displayed as 2 digit numbers and separated by a space. When less than 10 errors occurred, the rest of the line(s) is empty. In case of no errors, the text "No Errors" is displayed behind menu item "Errors 1". See paragraph 5.5 for a description.
7. **ERRORS 2.** Gives the first five errors of the error buffer. The last detected error is displayed at the most left position.
8. **OPERATIONAL HOURS.** The Operations Hours indicate the time that the display was active with half an hour resolution. It represents the system hours (OTC), not the PDP hours.
9. **RESET ERROR BUFFER.** Erase the contents of the error buffer. Press "OK" on your remote control to activate. The content of the error buffer is cleared.
10. **STORE.** This will store the performed alignments. Press "OK" on your remote control to activate.
    **Note:** if you do not want to store the performed alignments, leave the SAM mode via code 0 0 on your remote control. Do not activate the "store" item.

#### *How to navigate*

Use one of the following methods:

- Select the sub-menu's (upper line) with the CURSOR LEFT/RIGHT keys on the remote control transmitter.
- Select the menu items with the CURSOR UP/DOWN keys. With the CURSOR LEFT/RIGHT keys it is possible to:
  - Activate the selected menu item.
  - Change the value of the selected menu item.
- To toggle to the SDM mode, use the standard customer RC-transmitter and key in the code **062596**, directly followed by the **MENU** key.

#### *How to exit*

Use one of the following methods:

- Switch the set "off" (with the Mains switch or by pulling the Mains cord).
  **Note:** new alignment settings are always stored, even when item "store" was not activated!
- Switch the set to "standby" by pressing the power button on the remote control transmitter.
  **Note:** new alignment settings are always stored, even when item "store" was not activated!
- Use the standard RC-transmitter and key in the code **00**.
  **Note:** new alignment settings are not stored (except when item "store" was activated)!

### 5.2.3 Customer Service Mode (CSM)

#### *Purpose*

When a customer is having problems with his TV-set, he can call his dealer or helpdesk. The service technician can than ask the customer to activate the CSM, in order to identify the status of the set. Now, the service technician can judge the severness of the complaint. In many cases, he can advise the customer how to solve the problem, or he can decide if it is necessary to visit the customer.
The CSM is a read only mode; therefore, modifications in this mode are not possible.

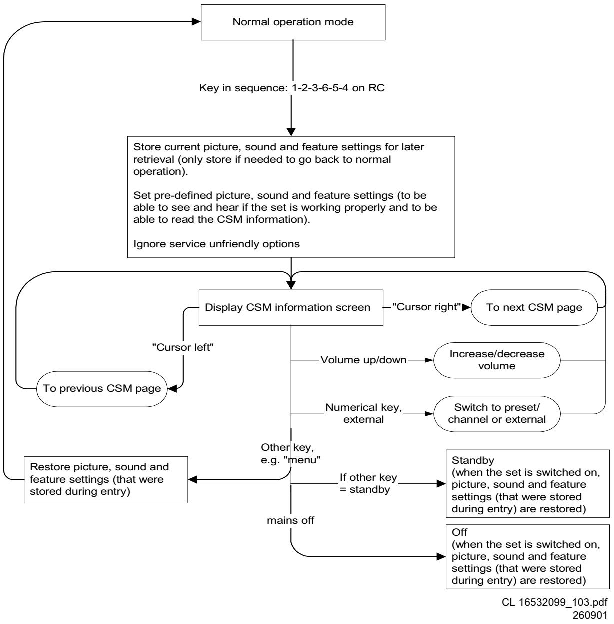
Normal operation mode
Key in sequence: 1-2-3-6-5-4 on RC
Store current picture, sound and feature settings for later retrieval (only store if needed to go back to normal operation).
Set pre-defined picture, sound and feature settings (to be able to see and hear if the set is working properly and to be able to read the CSM information).
Ignore service unfriendly options
Display CSM information screen
"Cursor right"
To next CSM page
"Cursor left"
To previous CSM page
Volume up/down
Increase/decrease volume
Numerical key, external
Switch to preset/ channel or external
Other key, e.g. "menu"
Restore picture, sound and feature settings (that were stored during entry)
If other key = standby
Standby (when the set is switched on, picture, sound and feature settings (that were stored during entry) are restored)
mains off
Off (when the set is switched on, picture, sound and feature settings (that were stored during entry) are restored)
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Figure 5-3 CSM Flowchart

***How to enter***
Use the standard customer RC-transmitter and key in the code **123654**.
When CSM is entered, the values of brightness, contrast, etc. are set to 50% (of max. value), and volume is set to 25%, to ensure that you always have a picture and sound.

After switching "on" the Customer Service Mode, the following screen will appear:

**Table 5-2 CSM Menu**

| **Customer Service Menu 1** | |
|---|---|
| 1 - Type Nr. - AG Code | 32FD9944/01S-AG02 (example) |
| 2 - SW Version OTC | AAAABC-X.Y_xxxxx |
| 3 - SW Version PW | AAAABC-X.Y_xxxxx |
| 4 - SW Version EPLD | AAAABC-X.Y_xxxxx |
| 5 - Code 1 | xx xx xx xx xx |
| 6 - Code 2 | xx xx xx xx xx |
| 7 - Volume | xx |
| 8 - Brightness | xx |
| 9 - Contrast | xx |

| | **Customer Service Menu 2** |
|---|---|
| 10 - Color | xx |
| 11 - Tint | xx |
| 12 - Sharpness | xx |
| 13 - Soundmode | xx |
| 14 - Source | xx |
| 15 - AV Mute | xx |
| | |
| | |
| | |

1. **TYPE NR. - AG CODE.** Gives the commercial type number of the monitor, e.g. xxFD9954/01S. The AG CODE is not implemented.
2. **SW VERSION OTC** (AAAABC-X.Y-xxxxx)
   **Note:** You will find details of the latest software versions in the chapter "Software Survey" of the "Product Survey - Colour Television" publication, which is published four times each year.
   - A = the chassis name (FM23 for **all** displays).
   - B = the region (E= Europe, A= Asia Pacific, U= NAFTA, L= LATAM or G = Global).
   - C = the configuration name (B= Basic, E= Enhanced).
   - X = the main software version number.
   - Y = the sub software version number.
   - x = last five digits of 12nc code.
3. **SW VERSION PW** (AAAABC-X.Y-xxxxx). See description above.
4. **SW VERSION EPLD** (AAAABC-X.Y-xxxxx). See description above.
5. **CODE 1.** Gives the last five errors of the error buffer. The last detected error is displayed at the most left position. The errors are displayed as 2 digit numbers and separated by a space. When less than 10 errors occurred, the rest of the line(s) is empty. In case of no errors, the text NO ERRORS is displayed behind menu item CODE 1. See paragraph "Error Buffer" for a description.
6. **CODE 2.** Gives the first five errors of the error buffer. The last detected error is displayed at the most left position.
7. **VOLUME.** Gives the last volume status for the selected source, as set by the customer.
8. **BRIGHTNESS.** Gives the last brightness status for the selected source, as set by the customer.
9. **CONTRAST.** Gives the last contrast status for the selected source, as set by the customer.
10. **COLOR** (not present in *Basic* configuration). Gives the last colour status for the selected source, as set by the customer.
11. **TINT** (only for *NTSC Enhanced* configuration). Gives the last tint status for the selected source, as set by the customer.
12. **SHARPNESS.** Gives the last sharpness status for the selected source, as set by the customer.
13. **SOUND MODE.** Gives the selected sound mode, as set by the customer.
14. **SOURCE.** Gives the selected source, as set by the customer.
15. **AV MUTE.** Indicates if AV Mute is "on" or "off".

***How to navigate***
Use one of the following methods:
- Switch to the other CSM page with the "cursor left/right" keys on the remote control.
- You can increase/decrease volume with the "volume up/ down" keys on the remote control.
- You can switch to another source with the "num / ext" keys on the remote control.

***How to exit***
Use one of the following methods:
- Press the MENU key of the remote control transmitter.
- Switch the set to "standby" with the Power switch on the remote control.
- Switch the set "off" with the Mains power switch on the set.

## 5.3 Problems and Solving Tips (Related to CSM)

### 5.3.1 Picture Problems

**Note:** Below described problems are all related to the monitor settings. The procedures to change the value (or status) of the different settings are described.

***Picture too dark or too bright***
Increase/decrease the "brightness" and/or the "contrast" value when the picture improves after you have switched on the Customer Service Mode. The new value is automatically stored.

***White line around picture elements and text***
Decrease the "sharpness" value when the picture improves after you have switched on the Customer Service Mode. The new value is automatically stored.

***Snowy picture and/or unstable picture***
A scrambled or decoded signal is received.

***Black and white picture***
Increase the "colour" value when the picture improves after you have switched on the Customer Service Mode. The new value is automatically stored.

***Menu text not sharp enough***
Decrease the "contrast" value when the picture improves after you have switched on the Customer Service Mode. The new value is automatically stored.

### 5.3.2 Sound Problems

***No sound from left or right speaker***
Check item VOLUME in the CSM mode. If value is low, increase the volume level. The new value is automatically stored.

***No sound or sound too loud (after channel change/ switching on)***
Increase/decrease the "volume" level when the volume is OK after you switched on the CSM. The new value is automatically stored.

## 5.4 ComPair

### 5.4.1 Introduction

ComPair (Computer Aided Repair) is a service tool for Philips Consumer Electronics products. ComPair is a further development on the European DST (Dealer Service Tool), which allows faster and more accurate diagnostics. ComPair has three big advantages:

- ComPair helps you to quickly get an understanding on how to repair the chassis in a short time by guiding you systematically through the repair procedures.
- ComPair allows very detailed diagnostics (on I2C level) and is therefore capable of accurately indicating problem areas. You do not have to know anything about I2C commands yourself because ComPair takes care of this.
- ComPair speeds up the repair time since it can automatically communicate with the chassis (when the microprocessor is working) and all repair information is directly available. When ComPair is installed together with the SearchMan electronic manual of the defective chassis, schematics and PWBs are only a mouse click away.

### 5.4.2 Specifications

ComPair consists of a Windows based faultfinding program, and an RS232 cable between PC and the (defective) product.

The ComPair faultfinding program is able to determine the problem of the defective monitor. ComPair can gather diagnostic information in two ways:

- **Automatic** (by communication with the monitor): ComPair can automatically read out the contents of the entire error buffer. Diagnosis is done on I2C level. ComPair can send and receive commands to the micro controller of the monitor, and so can access the I2C bus of the monitor. In this way, it is possible for ComPair to communicate (read and write) to devices on the I2C busses of the FTV monitor.
- **Manually** (by asking questions to you): Automatic diagnosis is only possible if the micro controller of the monitor is working correctly and only to a certain extend. When this is not the case, ComPair will guide you through the faultfinding tree by asking you questions (e.g. *Does the screen give a picture? Click on the correct answer: YES / NO*) and showing you examples (e.g. *Measure test-point F7 and click on the correct oscillogram you see on the oscilloscope*). You can answer by clicking on a link (e.g. text or a waveform picture) that will bring you to the next step in the faultfinding process.

By a combination of automatic diagnostics and an interactive question / answer procedure, ComPair will enable you to find most problems in a fast and effective way.

Beside fault finding, ComPair provides some additional features like:

- Software upgrading (upload possible to OTC and PW Scaler).
- Emulation of the (European) Dealer Service Tool (DST).
- If both ComPair and SearchMan (Electronic Service Manual) are installed, all the schematics and the PWBs of the set are available by clicking on the appropriate hyperlink.
  **Example:** Measure the DC-voltage on capacitor C2228 (Schematic/Panel) of the SCAVIO panel. Click on the "Panel" hyperlink to automatically show the PWB with a highlighted capacitor C2568. Click on the "Schematic" hyperlink to automatically show the position of the highlighted capacitor.

### 5.4.3 How to Connect

1. First, install the ComPair Browser software on your PC (read the installation instructions carefully).
2. Connect an RS232 interface cable between a free serial (COM) port on your PC and the RS232 connector on the plasma monitor.
3. Switch the plasma monitor "off" and "on" again (with the Mains switch).
4. Start the ComPair program and follow the instructions.

**Note:** once the set is in ComPair mode, the front LED will blink red, at a frequency of 0.3 Hz.

### 5.4.4 How to Order

ComPair order codes:

- Starter kit ComPair32 software (registration version): 3122 785 60040.
- Starter kit SearchMan32 software: 3122 785 60050.
- ComPair32 CD (update): 3122 785 60070.
- SearchMan32 CD (update): 3122 785 60080 (year 2002), 3122 785 60120 (year 2003). If you encounter any problems, contact your local support desk.

**Note:** The RS232 cable is not included. It is a standard cable (9p sub-D male-to-female) that can be obtained by a computer store. It is supplied however with the ComPair interface (4822 727 21631), necessary for servicing other Philips TVs.

## 5.5 Error Buffer

The error code buffer contains all detected errors since the last time the buffer was erased. The buffer is written from left to right. When an error occurs that is not yet in the error code buffer, it is written at the left side and all other errors shift one position to the right.

### 5.5.1 How to Read the Error Buffer

Use one of the following methods:

- On screen via the SAM (only if you have a picture). Examples:
  - Errors: **6 0 0 0 0,** error code 6 is the last and only detected error.

  - Errors: **9 6 0 0 0,** error code 6 was first detected and error code 9 is the last detected (newest) error.
- Via the blinking LED procedure (when you have no picture). See paragraph "The Blinking LED Procedure".
- Via ComPair.

### 5.5.2 How to Clear the Error Buffer

The error code buffer is cleared in the following cases:

- By activation of the RESET ERROR BUFFER command in the SAM menu.
- When you transmit the code **062599** with a standard remote control transmitter.

### 5.5.3 Error Codes

**Table 5-3 Error code overview**

| Error | Device | Description | Item | Diagr. |
|---|---|---|---|---|
| **1** | TEA6422D | Audio switch (only Enhanced) | 7798 | SC13 |
| **2** | MSP3451G | Sound processor | 7812 | SC14 |
| **3** | PCF8574-SCAVIO | I/O expander SCAVIO | 7540 | SC8 |
| **4** | PCF8591 | AD-DA expander | 7530 | SC8 |
| **5** | FS6377 | Clock generator | 7570 | SC9 |
| **6** | PCF8574-PSU | I/O expander PSU | 7370 | P3 |
| **7** | 24C16 OTC | NVM OTC | 7430 | SC7 |
| **8** | 24C16 PW | NVM PW | 7580 | SC9 |
| **9** | SAA7118 | Video decoder (only Enhanced) | 7225 | SC5 |
| **10** | AD9887 | ADC/TMDS receiver | 7170 | SC4 |
| **11** | SDA9400 | De-interlacer (only Enhanced) | 7280 | SC5 |
| **12** | EP1K30QC | EPLD processor | 7656 | SC11 |
| **13** | PDP | Display I2C error | | |
| **14** | PDP H2-version (FHP) | The "high brightness" mode (only for H2) does not function | | |
| **15** | LM75A | Temperature sensor I2C error (only for 37-inch) | 7372 | P3 |
| | | | | |
| **20** | Download comm. | Errors during downloading | | |
| **21** | CSP comm. | CSP time-out error | | |
| | | | | |
| **30** | PDP | Display HW error | | |
| **31** | PDP | Display warning code (e.g. loose connector or defective PSU) | | |
| | | | | |
| **40** | Temperature alarm | Detection of over-temperature | | |
| | | | | |
| **70** | V_s overvoltage | Overvoltage on V_s, V_a, +3V3, +5V or a combination | 7341 | P3 |
| **71** | V_s undervoltage | Undervoltage on V_s | 7308A/B | P3 |
| **72** | V_a undervoltage | Undervoltage on V_a | 7308C/D | P3 |
| **73** | +5V undervoltage | Undervoltage on +5V | 7330A/B | P3 |
| **74** | +3V3 undervoltage | Undervoltage on +3V3 | 7330C/D | P3 |
| **75** | DC-PROT | Audio amplifier protection | 7362 | P3 |
| **76** | TEMP-PSU | Over-temperature in PSU | 7366A | P3 |
| **77** | Protection with reason unknown | No valid protection can be read, but protection is active (PSU) | | |
| **78** | Protection after several retries | PW Scaler will not start comm. with OTC after several retries | | |
| | | | | |
| **9x** | OTC | Internal OTC error (replace OTC) | 7383 | SC7 |

**Notes:**

- In case of non-intermittent faults, clear the error buffer before you begin the repair. This to ensure that old error codes are no longer present.
- If possible, check the entire contents of the error buffer. In some situations, an error code is only the result of another error code and not the actual cause (e.g., a fault in the protection detection circuitry can also lead to a protection).

## 5.6 The Blinking LED Procedure

Via this procedure, you can make the contents of the error buffer visible via the front LED (orange colour). This is especially useful when there is no picture. When no errors are present, the LED will stay green.

When the SDM is entered, or when code **062500** is entered with the remote control, the LED will blink the contents of the error-buffer.

Error-codes ≥ 10 are shown as follows:

1. "n" long blinks of 750 ms, which is/are an indication of the decimal digit,
2. a pause of 1.5 s,
3. "n" short blinks (n = 1-9),
4. when all the error-codes are displayed, the sequence finishes with a LED blink of 3 s,
5. the sequence starts again.

Example of error buffer: **12 9 6 0 0**
After entering SDM:

1. 1 long blink of 750 ms followed by a pause of 1.5 s,
2. 2 short blinks followed by a pause of 3 s,
3. 9 short blinks followed by a pause of 3 s,
4. 6 short blinks followed by a pause of 3 s,
5. 1 long blink of 3 s to finish the sequence,
6. the sequence starts again.

## 5.7 Protections

You can read the error codes of the error buffer via the service menu (SAM), the blinking LED procedure, or via ComPair. If a fault situation is detected an error code will be generated and if necessary, the set will be put in the protection mode. Blinking of the red LED at a frequency of 5 Hz indicates the protection mode.
In some error cases, the microprocessor does not put the set in the protection mode. The error codes are indicated by an orange front LED.

To get a quick diagnosis the chassis has three service modes implemented:

- The Customer Service Mode (CSM): easy way to read out the status of the set.
- The Service Default Mode (SDM): start-up of the set in a predefined way.
- The Service Alignment Mode (SAM): adjustment of the set via a menu and with the help of test patterns.

## 5.8 Repair Tips

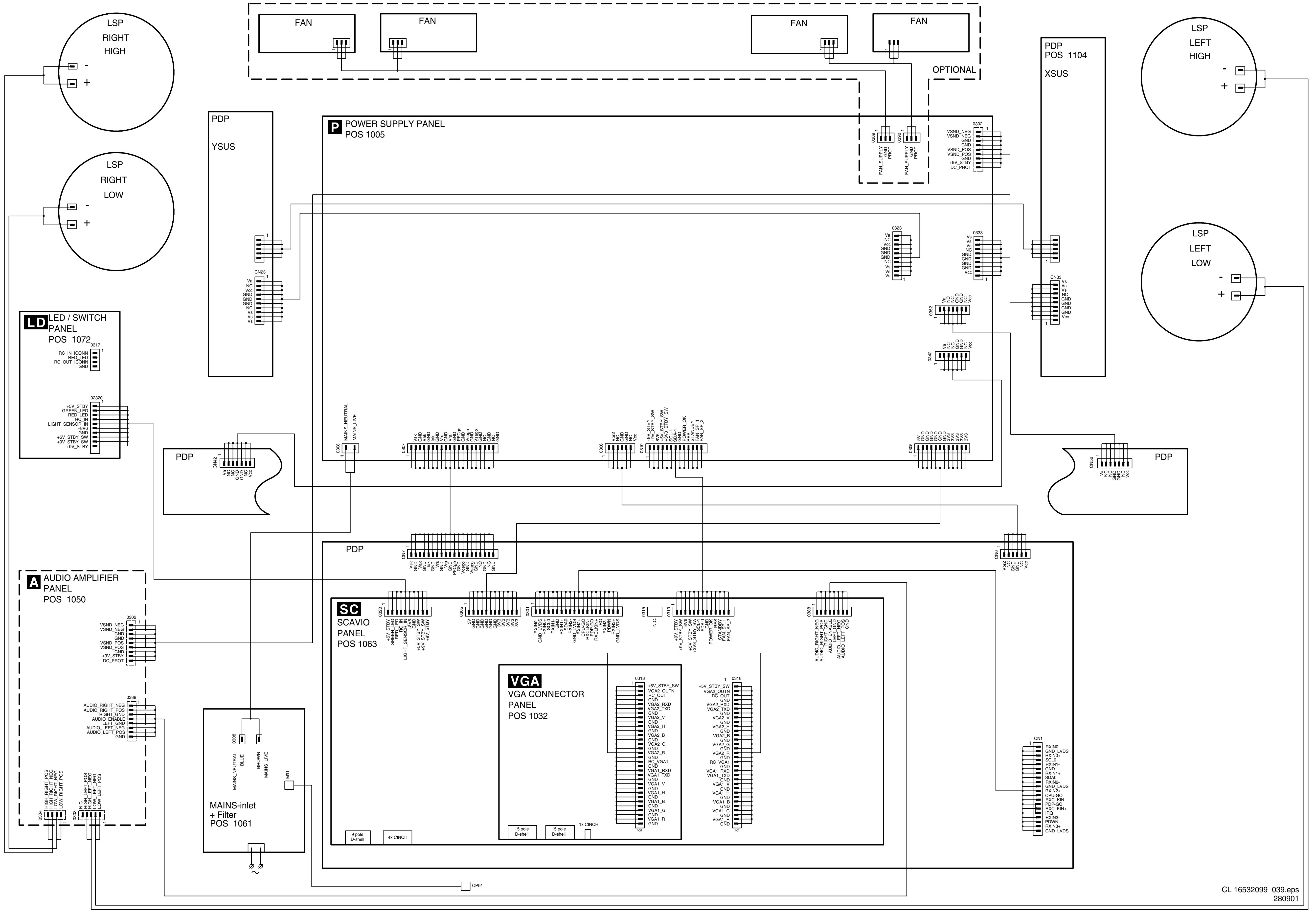
Below some failure symptoms are given, followed by a repair tip.

- **Error code indicates an under- or over voltage protection (errors 70 - 74).** Possible causes:
  - A short-circuit present on PSU.
  - A short-circuit present in PSU load circuit.
  - The converter is not functioning (no start-up, or non short-circuit failure).
- **Set starts up, but switches "off" soon.**
  1. Check the PSU outputs. If no output at all, verify the Power Factor Corrector (= PFC or pre-conditioner) e.g. the relays. When PFC is not switching, the LLC is actively held "off".
  2. If the PFC works, check the V_cego.
  3. If V_cego is high, check V_s on the LLC (Vs_unsw).
  4. If there is no V_s, check pin 15.
  5. If the voltage is OK, check pins 12 and 14.
  6. If there are no pulses, check controller pin 10.
  7. If pin 10 < 1 V, the IC is probably defect.
- **If fuse 1004 (diagram P6) is blown.** Check items 7005 and 7006. If **one** of them is defect, **replace both**!
- **If fuse 1400 (diagram P2) is blown.** Check diode bridge 6600, diodes 6605 and 6606, and MOSFET 7610 (diagram P5).
- **The set does not react on the Remote Control Transmitter.** If the monitor is set (by accident or deliberate) in ICONN-mode (via SAM - Options), and there is no ICONN-Box connected, the RC-signal line to the OTC is interrupted. This can be solved by connecting pin 8 and 9 of the RS232 connector at the rear of the monitor.

## *Personal Notes:*

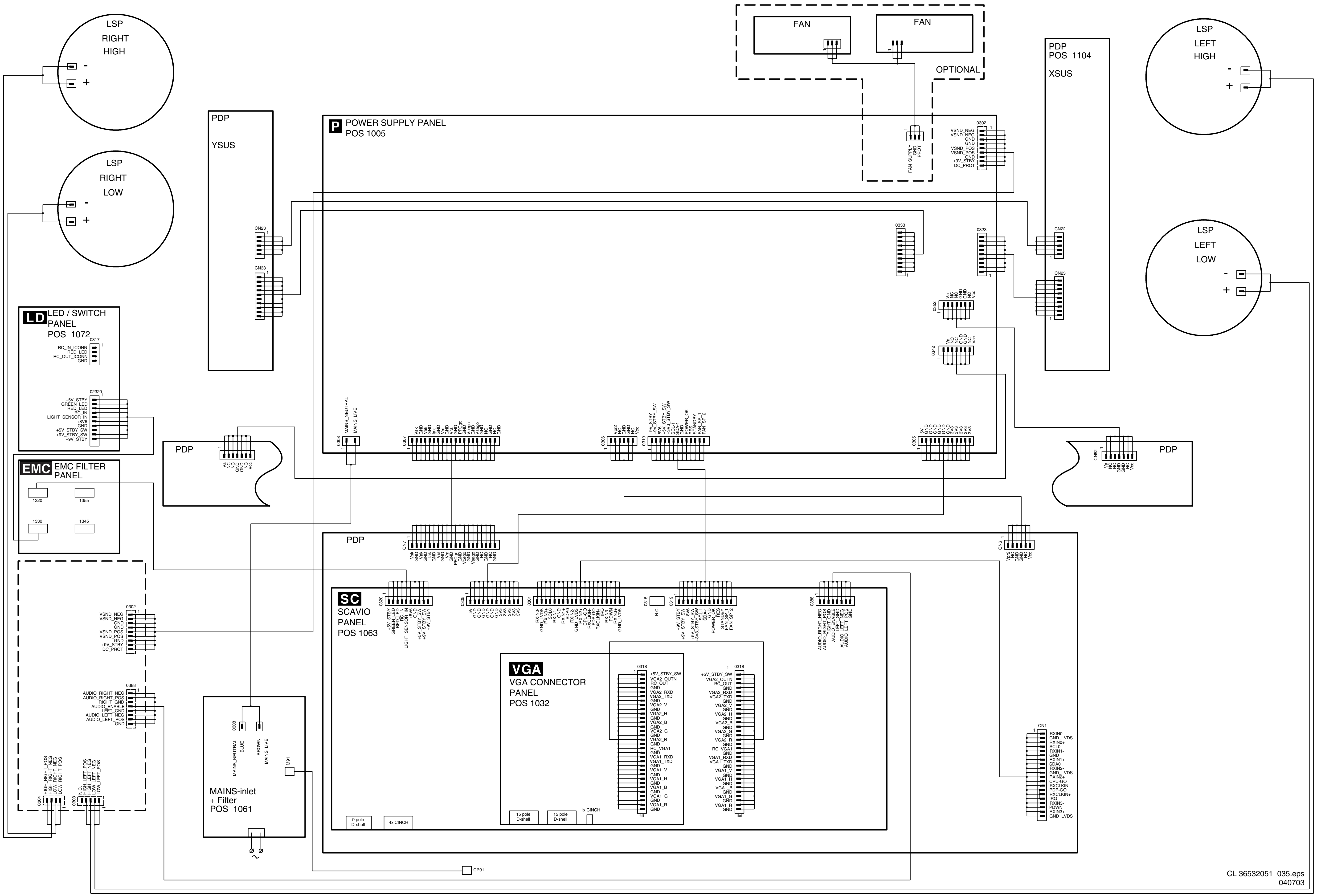
# 6. Block Diagrams, Testpoint Overview, and Waveforms

## Wiring Diagram (FM23 AC/FM24 AB)



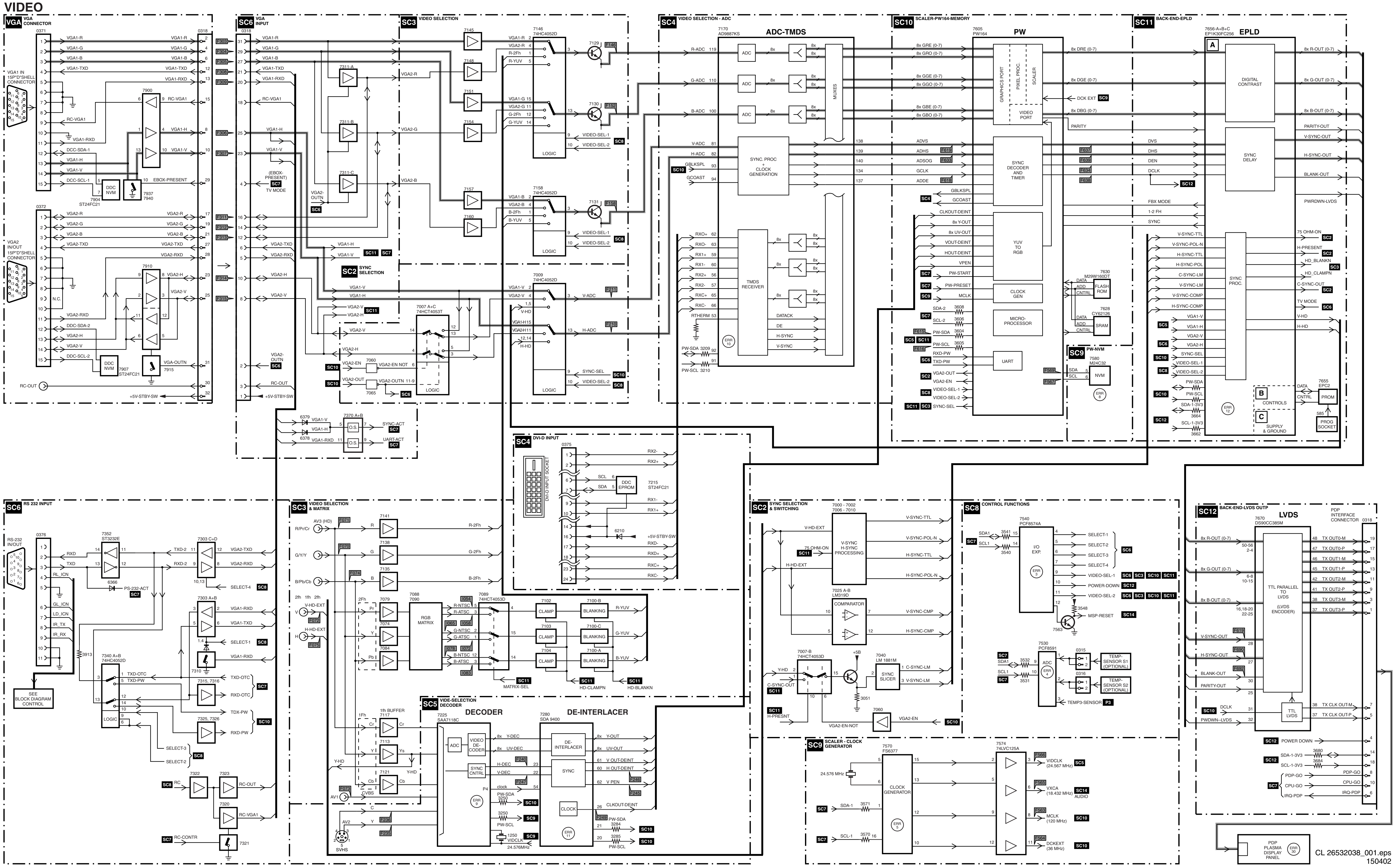
LSP RIGHT HIGH
LSP RIGHT LOW
LSP LEFT HIGH
LSP LEFT LOW
FAN
FAN
FAN
FAN
OPTIONAL
PDP YSUS
CN23
Va NC Vcc GND GND GND NC Vs Vs Vs
PDP POS 1104 XSUS
CN33
Vs Vs Vs NC GND GND GND GND Vcc
P POWER SUPPLY PANEL POS 1005
0389 FAN_SUPPLY GND PROT
0390 FAN_SUPPLY GND PROT
0302 VSND_NEG VSND_NEG GND GND VSND_POS VSND_POS GND +9V_STBY DC_PROT
0323 Va NC Vcc GND GND GND NC Vs Vs Vs
0333 Vs Vs Vs NC GND GND GND GND Vcc
0352 Va NC NC GND GND NC Vcc
0342 Va NC NC GND GND NC Vcc
0308 MAINS_NEUTRAL MAINS_LIVE
0307 Vsk GND Vak GND Iak GND Vrs GND Vra GND PFCgo GND Vcego GND Vsago GND NC GND NC GND
0306 Vpr2 NC GND GND NC Vcc
0319 +9V_STBY +9V_STBY_SW 8V6 +5V_STBY_SW +3V3_STBY_SW SCL-1 SDA-1 GND POWER_OK RES STANDBY FAN_SP_1 FAN_SP_2
0305 5V GND GND GND GND GND GND 3V3 3V3 3V3 3V3 3V3
LD LED / SWITCH PANEL POS 1072
0317 RC_IN_ICONN RED_LED RC_OUT_ICONN GND
02320 +5V_STBY GREEN_LED RED_LED RC_IN LIGHT_SENSOR_IN +8V6 GND +5V_STBY_SW +9V_STBY_SW +9V_STBY
PDP
CN42 Va NC NC GND GND NC Vcc
PDP
CN52 Va NC NC GND GND NC Vcc
PDP
CN7 Vsk GND Vak GND Iak GND Vrs GND Vra GND PFCgo GND Vcego GND Vsago GND NC GND NC GND
CN6 Vpr2 NC GND GND NC Vcc
A AUDIO AMPLIFIER PANEL POS 1050
0302 VSND_NEG VSND_NEG GND GND VSND_POS VSND_POS GND +9V_STBY DC_PROT
0388 AUDIO_RIGHT_NEG AUDIO_RIGHT_POS RIGHT_GND AUDIO_ENABLE LEFT_GND AUDIO_LEFT_NEG AUDIO_LEFT_POS GND
0304 HIGH_RIGHT_POS HIGH_RIGHT_NEG LOW_RIGHT_NEG LOW_RIGHT_POS
0303 N.C. HIGH_LEFT_POS HIGH_LEFT_NEG LOW_LEFT_NEG LOW_LEFT_POS
SC SCAVIO PANEL POS 1063
0320 +5V_STBY GREEN_LED RED_LED RC_IN LIGHT_SENSOR_IN +8V6 GND +5V_STBY_SW +9V_STBY_SW +9V_STBY
0305 5V GND GND GND GND GND GND 3V3 3V3 3V3 3V3 3V3
0301 RXIN0- GND_LVDS RXIN0+ SCL0 RXIN1- GND RXIN1+ SDA0 RXIN2- GND_LVDS RXIN2+ CPU-GO RXCLKIN- PDP-GO RXCLKIN+ IRQ RXIN3- PDWN RXIN3+ GND_LVDS
0315 N.C.
0319 +9V_STBY +9V_STBY_SW 8V6 +5V_STBY_SW +3V3_STBY_SW SCL-1 SDA-1 GND POWER_OK RES STANDBY FAN_SP_1 FAN_SP_2
0388 AUDIO_RIGHT_NEG AUDIO_RIGHT_POS RIGHT_GND AUDIO_ENABLE LEFT_GND AUDIO_LEFT_NEG AUDIO_LEFT_POS GND
VGA VGA CONNECTOR PANEL POS 1032
0318 +5V_STBY_SW VGA2_OUTN RC_OUT GND VGA2_RXD VGA2_TXD GND VGA2_V GND VGA2_H GND VGA2_B GND VGA2_G GND VGA2_R GND RC_VGA1 GND VGA1_RXD VGA1_TXD GND VGA1_V GND VGA1_H GND VGA1_B GND VGA1_G GND VGA1_R GND
foil
0318 +5V_STBY_SW VGA2_OUTN RC_OUT GND VGA2_RXD VGA2_TXD GND VGA2_V GND VGA2_H GND VGA2_B GND VGA2_G GND VGA2_R GND RC_VGA1 GND VGA1_RXD VGA1_TXD GND VGA1_V GND VGA1_H GND VGA1_B GND VGA1_G GND VGA1_R GND
foil
15 pole D-shell
15 pole D-shell
1x CINCH
9 pole D-shell
4x CINCH
CN1 RXIN0- GND_LVDS RXIN0+ SCL0 RXIN1- GND RXIN1+ SDA0 RXIN2- GND_LVDS RXIN2+ CPU-GO RXCLKIN- PDP-GO RXCLKIN+ IRQ RXIN3- PDWN RXIN3+ GND_LVDS
MAINS-inlet + Filter POS 1061
0308 MAINS_NEUTRAL BLUE BROWN MAINS_LIVE
M91
CP91
CL 16532099_039.eps
280901

## Wiring Diagram (FM33 AA)


LSP
RIGHT
HIGH
LSP
RIGHT
LOW
LSP
LEFT
HIGH
LSP
LEFT
LOW
FAN
FAN
OPTIONAL
PDP
YSUS
CN23
CN33
P POWER SUPPLY PANEL
POS 1005
FAN_SUPPLY
GND
PROT
0302
VSND_NEG
VSND_NEG
GND
GND
VSND_POS
VSND_POS
GND
+9V_STBY
DC_PROT
0333
0323
0352
0342
Va
NC
GND
GND
NC
Vcc
PDP
POS 1104
XSUS
CN22
CN23
LD LED / SWITCH
PANEL
POS 1072
0317
RC_IN_ICONN
RED_LED
RC_OUT_ICONN
GND
02320
+5V_STBY
GREEN_LED
RED_LED
RC_IN
LIGHT_SENSOR_IN
+8V6
GND
+5V_STBY_SW
+9V_STBY_SW
+9V_STBY
EMC EMC FILTER
PANEL
1320
1355
1330
1345
PDP
Va
NC
NC
GND
GND
NC
Vcc
0308
MAINS_NEUTRAL
MAINS_LIVE
0307
Vsk
GND
Vak
GND
Isk
Ia
GND
Vs
GND
Va
GND
PFCgo
GND
Vcego
GND
Vsago
GND
NC
GND
GND
0306
Vpr2
NC
GND
GND
NC
Vcc
0319
+9V_STBY_SW
+9V_STBY_SW
8V6
+5V_STBY_SW
+3V3_STBY_SW
SCL1
SDA1
GND
POWER_OK
RES
STANDBY
FAN_SP_1
FAN_SP_2
0305
5V
GND
GND
GND
GND
GND
3V3
3V3
3V3
3V3
PDP
CN62
Va
NC
GND
GND
NC
Vcc
PDP
CN7
CN6
Vpr2
NC
GND
GND
NC
Vcc
SC
SCAVIO
PANEL
POS 1063
0320
+5V_STBY
GREEN_LED
RED_LED
RC_IN
LIGHT_SENSOR_IN
+8V6
GND
+5V_STBY_SW
+9V_STBY_SW
+9V_STBY
0305
5V
GND
GND
GND
GND
GND
3V3
3V3
3V3
3V3
0301
RXIN0-
GND_LVDS
RXIN0+
SCL0
GND
RXIN1-
RXIN1+
SDA0
RXIN2-
GND_LVDS
RXIN2+
CPU-GO
RXCLKIN-
PDP-GO
RXCLKIN+
IRQ
RXIN3-
PDWN
RXIN3+
GND_LVDS
0315
N.C.
0319
+9V_STBY_SW
+9V_STBY_SW
8V6
+5V_STBY_SW
+3V3_STBY_SW
SCL1
SDA1
GND
POWER_OK
RES
STANDBY
FAN_SP_1
FAN_SP_2
0388
AUDIO_RIGHT_NEG
AUDIO_RIGHT_POS
RIGHT_GND
AUDIO_ENABLE
LEFT_GND
AUDIO_LEFT_NEG
AUDIO_LEFT_POS
GND
0302
VSND_NEG
VSND_NEG
GND
GND
VSND_POS
VSND_POS
GND
+9V_STBY
DC_PROT
0388
AUDIO_RIGHT_NEG
AUDIO_RIGHT_POS
RIGHT_GND
AUDIO_ENABLE
LEFT_GND
AUDIO_LEFT_NEG
AUDIO_LEFT_POS
GND
0304
HIGH_RIGHT_POS
HIGH_RIGHT_NEG
LOW_RIGHT_NEG
LOW_RIGHT_POS
0303
N.C.
HIGH_LEFT_POS
HIGH_LEFT_NEG
LOW_LEFT_NEG
LOW_LEFT_POS
0308
MAINS_NEUTRAL
BLUE
BROWN
MAINS_LIVE
M91
MAINS-inlet
+ Filter
POS 1061
VGA
VGA CONNECTOR
PANEL
POS 1032
0318
+5V_STBY_SW
VGA2_OUTN
RC_OUT
GND
VGA2_RXD
VGA2_TXD
GND
VGA2_V
GND
VGA2_H
GND
VGA2_B
GND
VGA2_G
GND
VGA2_R
GND
RC_VGA1
GND
VGA1_RXD
VGA1_TXD
GND
VGA1_V
GND
VGA1_H
GND
VGA1_B
GND
VGA1_G
GND
VGA1_R
GND
0318
9 pole
D-shell
4x CINCH
15 pole
D-shell
15 pole
D-shell
1x CINCH
CN1
RXIN0-
GND_LVDS
RXIN0+
SCL0
RXIN1-
GND
RXIN1+
SDA0
RXIN2-
GND_LVDS
RXIN2+
CPU-GO
RXCLKIN-
PDP-GO
RXCLKIN+
IRQ
RXIN3-
PDWN
RXIN3+
GND_LVDS
CP91
CL 36532051_035.eps
040703

# Block Diagram Video (FM23 AC/FM24 AB/FM33 AA)

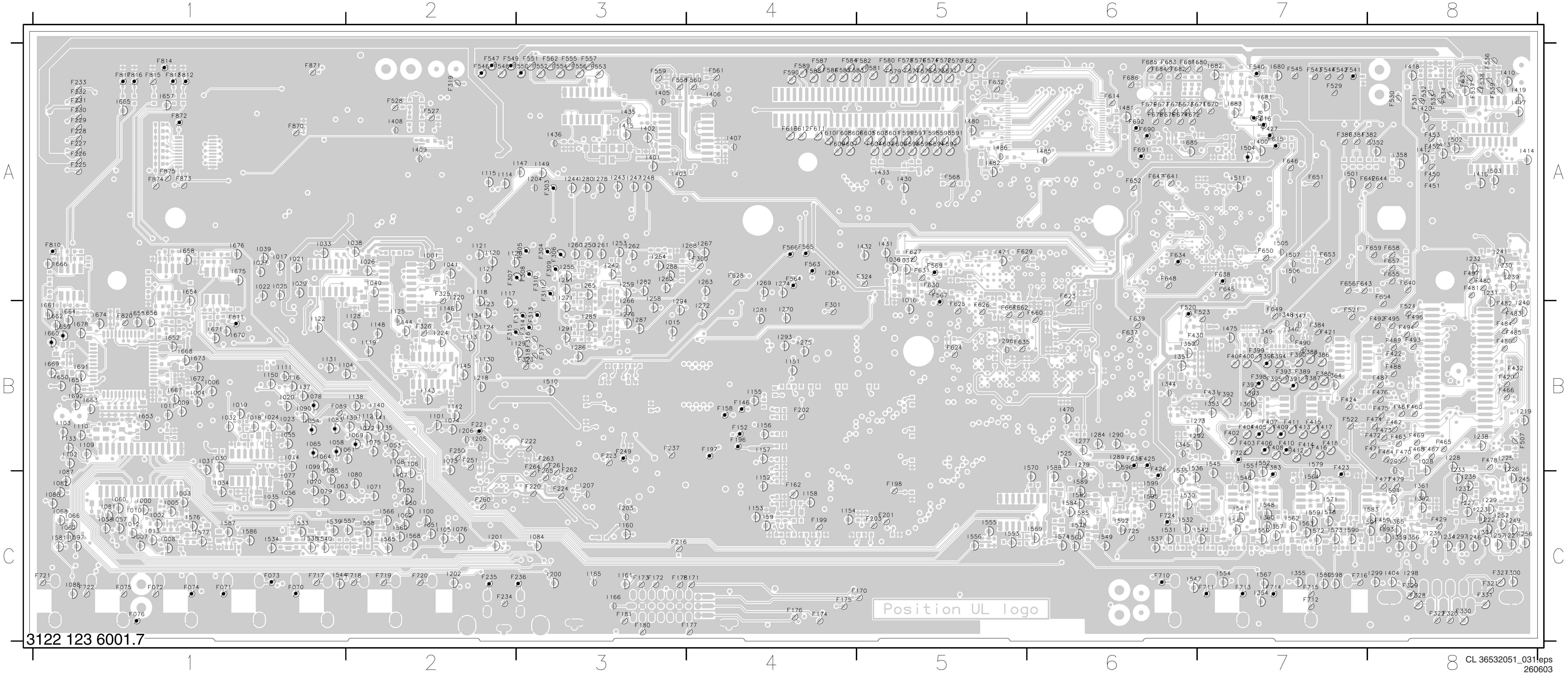
## VIDEO


VGA VGA CONNECTOR
0371
VGA1 IN 15P"D"SHELL CONNECTOR
0372
VGA2 IN/OUT 15P"D"SHELL CONNECTOR
7900
7910
DDC NVM
7904 ST24FC21
7907 ST24FC21
7937
7940
7915
RC-OUT
+5V-STBY-SW
SC6 VGA INPUT
0318
RC-VGA1
(EBOX-PRESENT) TV MODE
SC2 SYNC SELECTION
SC3 VIDEO SELECTION
7311-A
7311-B
7311-C
7145
7148
7151
7154
7157
7160
7146 74HC4052D
7158 74HC4052D
7009 74HC4052D
7007 A+C 74HCT4053T
7060
7065
7370 A+B
O.S.
6379
6378
SYNC-ACT
UART-ACT
LOGIC
7129
7130
7131
VIDEO-SEL-1
VIDEO-SEL-2
SYNC-SEL
V-ADC
H-ADC
SC4 VIDEO SELECTION - ADC
7170 AD9887KS
ADC-TMDS
ADC
MUXES
SYNC. PROC + CLOCK GENERATION
TMDS RECEIVER
R-ADC
G-ADC
B-ADC
GBLKSPL
GCOAST
RXO+
RXO-
RX1+
RX1-
RX2+
RX2-
RXC+
RXC-
RTHERM
DATACK
DE
H-SYNC
V-SYNC
PW-SDA 3209
PW-SCL 3210
ERR 10
SC10 SCALER-PW164-MEMORY
7605 PW164
PW
GRAPHICS PORT
PIXEL PROC.
SCALER
VIDEO PORT
SYNC DECODER AND TIMER
YUV TO RGB
CLOCK GEN
MICRO-PROCESSOR
UART
8x GRE (0-7)
8x GRO (0-7)
8x GGE (0-7)
8x GGO (0-7)
8x GBE (0-7)
8x GBO (0-7)
ADVS
ADHS
ADSOG
GCLK
ADDE
GBLKSPL
GCOAST
CLKOUT-DEINT
8x Y-OUT
8x UV-OUT
VOUT-DEINT
HOUT-DEINT
VPEN
PW-START
PW-PRESET
MCLK
SDA-2
SCL-2
PW-SDA
PW-SCL
RXD-PW
TXD-PW
VGA2-OUT
VGA2-EN
VIDEO-SEL-1
VIDEO-SEL-2
SYNC-SEL
8x DRE (0-7)
8x DGE (0-7)
DCK EXT
8x DBG (0-7)
PARITY
7630 M29W160DT
FLASH ROM
7628 CY62126
SRAM
SC9 PW-NVM
7580 M24C32
NVM
ERR 8
SC11 BACK-END-EPLD
7656-A+B+C EP1K30FC256
EPLD
DIGITAL CONTRAST
SYNC DELAY
SYNC PROC
DVS
DHS
DEN
DCLK
FBX MODE
1-2 FH
SYNC
8x R-OUT (0-7)
8x G-OUT (0-7)
8x B-OUT (0-7)
PARITY-OUT
V-SYNC-OUT
H-SYNC-OUT
BLANK-OUT
PWRDWN-LVDS
75 OHM-ON
H-PRESENT
HD_BLANKN
HD_CLAMPN
C-SYNC-OUT
TV MODE
V-HD
H-HD
7655 EPC2
PROM
585 PROG SOCKET
CONTROLS
SUPPLY & GROUND
ERR 12
SC4 DVI-D INPUT
0375
DVI-D INPUT SOCKET
DDC EPROM
7215 ST24FC21
6210
+5V-STBY-SW
SC6 RS 232 INPUT
0376
RS-232 IN/OUT
7352 ST3232E
7303 C+D
7303 A+B
6366
PS-232-ACT
7340 A+B 74HC4052D
3913
7310
7315, 7316
7325, 7326
7322
7323
7320
7321
SEE BLOCK DIAGRAM CONTROL
TXD-OTC
RXD-OTC
TDX-PW
RXD-PW
SELECT-3
SELECT-2
RC-CONTR
SC3 VIDEO SELECTION & MATRIX
AV3 (HD)
R/Pr/Cr
G/Y/Y
B/Pb/Cb
V-HD-EXT
H-HD-EXT
AV1
AV2
SVHS
7141
7138
7135
7079
7074
7084
7088 7090
RGB MATRIX
7089 74HCT4053D
7102 CLAMP
7103 CLAMP
7104 CLAMP
7100-B BLANKING
7100-C BLANKING
7100-A BLANKING
R-YUV
G-YUV
B-YUV
MATRIX-SEL
HD-CLAMPN
HD-BLANKN
1fh BUFFER 7117
7113
7121
CVBS
SC5 VIDE-SELECTION DECODER
7225 SAA7118C
DECODER
ADC
VIDEO DECODER
SYNC CNTRL
ERR 9
7280 SDA 9400
DE-INTERLACER
SYNC
CLOCK
ERR 11
24.576MHz
SC2 SYNC SELECTION & SWITCHING
7000 - 7002 7006 - 7010
V-SYNC H-SYNC PROCESSING
7025 A-B LM319D
COMPARATOR
7007-B 74HCT4053D
7040 LM 1881M
SYNC SLICER
7060
V-SYNC-TTL
V-SYNC-POL-N
H-SYNC-TTL
H-SYNC-POL-N
V-SYNC-CMP
H-SYNC-CMP
C-SYNC-LM
V-SYNC-LM
VGA2-EN-NOT
H-PRESNT
SC8 CONTROL FUNCTIONS
7540 PCF8574A
I/O EXP.
ERR 3
SELECT-1
SELECT-2
SELECT-3
SELECT-4
VIDEO-SEL-1
POWER-DOWN
VIDEO-SEL-2
MSP-RESET
7563
7530 PCF8591
ADC
ERR 4
TEMP-SENSOR S1 (OPTIONAL)
TEMP-SENSOR S2 (OPTIONAL)
TEMP3-SENSOR
SC9 SCALER - CLOCK GENERATOR
7570 FS6377
CLOCK GENERATOR
ERR 5
24.576 MHz
7574 74LVC125A
VIDCLK (24.567 MHz)
VXCA (18.432 MHz) AUDIO
MCLK (120 MHz)
DCKEXT (36 MHz)
SC12 BACK-END-LVDS OUTP
7670 DS90CC385M
LVDS
TTL PARALLEL TO LVDS (LVDS ENCODER)
TTL LVDS
PDP INTERFACE CONNECTOR 0318
TX OUT0-M
TX OUT0-P
TX OUT1-M
TX OUT1-P
TX OUT2-M
TX OUT2-P
TX OUT3-M
TX OUT3-P
TX CLK OUT-M
TX CLK OUT-P
POWER DOWN
SDA-1-3V3
SCL-1-3V3
PDP-GO
CPU-GO
IRQ-PDP
PDP PLASMA DISPLAY PANEL
ERR 30

CL 26532038_001.eps
150402

# Testpoint Overview: SCAVIO Panel

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| F070 C1 | F201 C5 | F245 B5 | F316 B3 | F391 B7 | F418 B7 | F467 B8 | F495 B8 | F542 A7 | F569 A5 | F596 A5 | F623 B6 | F650 A7 | F684 A6 | F815 A1 | I017 A1 | I052 C2 | I079 C1 | I115 A2 | I144 B2 | I207 C3 | I244 A3 | I271 B3 | I298 C8 | I400 A7 | I470 B6 | I539 C1 | I566 C2 | I593 C8 | I670 B1 |
| F071 C1 | F202 B4 | F246 B5 | F317 B3 | F392 B7 | F419 B7 | F468 B8 | F496 B8 | F543 A7 | F570 A5 | F597 A5 | F624 B5 | F651 A7 | F685 A6 | F816 A1 | I018 B1 | I053 B2 | I080 C2 | I116 B1 | I145 B2 | I218 B2 | I245 C8 | I272 B4 | I299 C8 | I401 A3 | I471 A5 | I540 C1 | I567 C7 | I594 C8 | I671 B1 |
| F072 C1 | F203 C5 | F247 B5 | F318 B3 | F393 B7 | F420 B8 | F469 B8 | F497 A8 | F544 A7 | F571 A5 | F598 A5 | F625 B5 | F652 A6 | F686 A6 | F817 A1 | I019 B1 | I054 B1 | I081 C1 | I117 B2 | I146 B2 | I219 B8 | I246 C8 | I273 B7 | I300 C8 | I402 A3 | I475 B7 | I541 C7 | I568 C2 | I595 C6 | I672 B1 |
| F073 C1 | F210 C3 | F249 B3 | F319 A2 | F394 B7 | F421 B7 | F470 B8 | F506 B8 | F545 A7 | F572 A5 | F599 A5 | F626 B5 | F653 A7 | F690 A6 | F820 B1 | I020 B1 | I055 B1 | I082 C1 | I118 B2 | I147 A3 | I220 B2 | I247 A3 | I274 A4 | I301 C8 | I403 A3 | I480 A5 | I542 C7 | I569 C6 | I596 C6 | I673 B1 |
| F074 C1 | F211 C3 | F250 B2 | F320 C8 | F395 B7 | F422 B8 | F471 B8 | F507 B8 | F546 A2 | F573 A5 | F600 A5 | F627 A5 | F654 B8 | F691 A6 | F870 A1 | I021 A1 | I056 C1 | I083 B1 | I119 B2 | I148 B2 | I221 C8 | I248 A3 | I275 B4 | I344 B6 | I404 C8 | I481 A6 | I543 C7 | I570 C6 | I597 C1 | I674 B1 |
| F075 C1 | F216 C3 | F251 B2 | F321 C8 | F396 B7 | F423 C7 | F472 B8 | F520 B6 | F547 A2 | F574 A5 | F601 A5 | F628 A4 | F655 A8 | F692 A6 | F871 A1 | I022 A1 | I057 C1 | I084 C3 | I120 A2 | I149 A3 | I222 C8 | I249 C8 | I276 B3 | I345 B6 | I405 A3 | I482 A5 | I544 C1 | I571 C7 | I598 C7 | I675 A1 |
| F076 C1 | F220 C3 | F260 C2 | F322 C8 | F397 B7 | F424 B7 | F473 B8 | F521 B7 | F548 A2 | F575 A5 | F602 A5 | F629 A5 | F656 A7 | F710 C6 | F872 A1 | I023 B1 | I058 B1 | I085 C1 | I121 A2 | I150 B1 | I223 C8 | I250 A3 | I277 B6 | I346 B7 | I406 A4 | I485 A6 | I545 C7 | I572 C7 | I599 C6 | I676 A1 |
| F089 B1 | F221 B2 | F261 C3 | F323 B3 | F398 B7 | F425 B6 | F474 B8 | F522 B7 | F549 A2 | F576 A5 | F603 A5 | F630 A5 | F657 A8 | F711 C7 | F873 A1 | I024 B1 | I059 C1 | I086 C1 | I122 B1 | I151 B4 | I224 B2 | I251 A3 | I278 A3 | I347 B7 | I407 A4 | I486 A5 | I546 C7 | I573 C7 | I650 B1 | I678 B1 |
| F146 B4 | F222 B3 | F262 C3 | F324 A5 | F399 B7 | F426 C6 | F475 B8 | F523 B7 | F550 A3 | F577 A5 | F604 A5 | F631 A5 | F658 A8 | F712 C7 | F874 A1 | I025 A1 | I060 C1 | I087 C1 | I123 B2 | I152 C4 | I225 B8 | I252 C8 | I279 C6 | I348 B7 | I408 A2 | I501 A7 | I547 C6 | I574 C6 | I651 B1 | I680 A7 |
| F152 B4 | F223 B3 | F263 B3 | F325 A2 | F400 B7 | F427 A7 | F476 B8 | F524 B8 | F551 A3 | F578 A5 | F605 A5 | F632 A5 | F659 A8 | F713 C7 | F875 A1 | I026 A2 | I061 B2 | I088 C1 | I124 B2 | I153 C4 | I226 C8 | I253 A3 | I280 A3 | I349 B7 | I409 A2 | I502 A8 | I548 C7 | I575 C6 | I652 B1 | I681 A7 |
| F158 B4 | F224 C3 | F264 C3 | F326 B2 | F401 B7 | F428 A7 | F477 C8 | F525 B6 | F552 A3 | F579 A5 | F606 A4 | F633 B5 | F660 B6 | F714 C7 | I001 A2 | I027 A1 | I062 C2 | I090 B1 | I125 B2 | I154 C4 | I227 C8 | I254 A3 | I281 B4 | I350 B6 | I410 A8 | I503 A8 | I549 C6 | I576 C1 | I653 B1 | I682 A7 |
| F162 C4 | F225 A1 | F265 C3 | F327 C8 | F402 B7 | F429 C8 | F478 B8 | F526 B6 | F553 A3 | F580 A5 | F607 A4 | F634 A6 | F661 B5 | F715 C7 | I0010 C1 | I028 B8 | I063 C1 | I099 C1 | I126 A2 | I155 B4 | I228 B8 | I255 A3 | I282 A3 | I351 B6 | I411 A8 | I504 A7 | I550 C7 | I577 C1 | I654 B1 | I683 A7 |
| F170 C5 | F226 A1 | F300 A4 | F328 C8 | F403 B7 | F430 B6 | F479 C8 | F527 A2 | F554 A3 | F581 A5 | F608 A4 | F635 B5 | F662 B5 | F716 C7 | I002 C1 | I029 A1 | I064 B1 | I100 C2 | I127 A2 | I156 B4 | I229 C8 | I256 C8 | I283 A3 | I352 A8 | I412 A8 | I505 A7 | I551 C7 | I578 C7 | I655 B1 | I685 A6 |
| F171 C4 | F227 A1 | F301 B4 | F329 C8 | F404 B7 | F431 B7 | F480 A8 | F528 A2 | F555 A3 | F582 A5 | F609 A4 | F636 B6 | F670 A7 | F717 C1 | I003 C1 | I030 B1 | I065 B1 | I101 B2 | I128 B2 | I157 B4 | I230 A8 | I257 C8 | I284 B6 | I353 B7 | I413 A8 | I506 A7 | I552 C7 | I579 C7 | I656 B1 | I691 B1 |
| F172 C3 | F228 A1 | F303 A3 | F330 C8 | F405 B7 | F432 B8 | F481 A8 | F529 A7 | F556 A3 | F583 A4 | F610 A4 | F637 B6 | F671 A7 | F718 C2 | I004 B1 | I031 B1 | I066 C1 | I102 B1 | I129 B3 | I158 C4 | I231 B8 | I258 B3 | I285 B3 | I354 C7 | I414 A8 | I507 A7 | I553 C5 | I580 C7 | I657 A1 | I692 B1 |
| F173 C3 | F229 A1 | F304 A3 | F331 C8 | F406 B7 | F450 A8 | F482 B8 | F530 A8 | F557 A3 | F584 A4 | F611 A4 | F638 A7 | F672 A6 | F719 C2 | I005 C1 | I032 B1 | I067 C1 | I103 B1 | I130 B2 | I159 C4 | I232 A8 | I259 A3 | I286 B3 | I355 C7 | I415 A3 | I510 B3 | I554 C7 | I581 C1 | I658 A1 | |
| F174 C4 | F230 A1 | F305 A3 | F380 A7 | F407 B7 | F451 A8 | F483 B8 | F531 A8 | F558 A3 | F585 A4 | F612 A4 | F639 B6 | F673 A6 | F720 C2 | I006 B1 | I033 A1 | I068 C1 | I104 B1 | I131 B1 | I160 C3 | I233 C8 | I260 A3 | I287 B3 | I356 C8 | I416 A8 | I511 A7 | I555 C5 | I582 C6 | I659 B1 | |
| F175 C4 | F231 A1 | F306 A3 | F381 A7 | F408 B7 | F452 A8 | F484 B8 | F532 A8 | F559 A3 | F586 A4 | F613 A4 | F640 A8 | F674 A6 | F721 C1 | I007 C1 | I034 C1 | I069 B2 | I105 C2 | I133 B1 | I161 C3 | I234 C8 | I261 A3 | I288 A3 | I357 C7 | I417 A8 | I525 B6 | I556 C5 | I583 C8 | I660 B1 | |
| F176 C4 | F232 A1 | F307 A3 | F382 A8 | F409 B7 | F453 A8 | F485 B8 | F533 A8 | F560 A4 | F587 A4 | F614 A6 | F641 A6 | F675 A6 | F722 C1 | I008 C1 | I035 C1 | I070 C1 | I106 C2 | I134 B2 | I165 C3 | I235 C8 | I262 A3 | I289 B6 | I358 A8 | I418 A8 | I530 C6 | I557 C2 | I584 C6 | I661 B1 | |
| F177 C4 | F233 A1 | F308 A3 | F383 C7 | F410 B7 | F459 C8 | F486 B8 | F534 A8 | F561 A4 | F588 A4 | F615 A7 | F642 A8 | F676 A6 | F723 B7 | I009 B1 | I036 A5 | I071 C2 | I107 C2 | I135 B2 | I166 C3 | I236 C8 | I263 A4 | I290 B6 | I359 C8 | I419 A8 | I531 C6 | I558 C2 | I585 C6 | I662 B1 | |
| F178 C3 | F234 C2 | F309 A3 | F384 B7 | F411 B7 | F460 B8 | F487 B8 | F535 A8 | F562 A3 | F589 A4 | F616 A7 | F643 A7 | F677 A6 | F724 C6 | I010 C1 | I037 A5 | I072 B2 | I108 B2 | I137 B1 | I200 C3 | I237 C8 | I264 A4 | I291 B3 | I360 C7 | I420 A8 | I532 C6 | I559 C7 | I586 C1 | I663 B1 | |
| F180 C3 | F235 C2 | F310 A3 | F385 B7 | F412 B7 | F461 B8 | F488 B8 | F536 A8 | F563 A4 | F590 A4 | F617 A5 | F644 A8 | F678 A6 | F725 C6 | I011 B1 | I038 A2 | I073 B2 | I109 B1 | I138 B2 | I201 C2 | I238 B8 | I265 A3 | I292 B6 | I361 C8 | I430 A5 | I533 C1 | I560 C2 | I587 C1 | I664 B1 | |
| F181 C3 | F236 C3 | F311 A3 | F386 B7 | F413 B7 | F462 B8 | F489 B8 | F537 A8 | F564 A4 | F591 A5 | F618 B4 | F645 A7 | F679 A6 | F810 A1 | I012 C1 | I039 A1 | I074 B2 | I110 B1 | I139 B2 | I202 C2 | I239 A8 | I266 B3 | I293 B4 | I362 C8 | I431 A5 | I534 C1 | I561 C6 | I588 C6 | I665 A1 | |
| F196 B4 | F237 B3 | F312 B3 | F387 B7 | F414 B7 | F463 B8 | F490 B7 | F538 A8 | F565 A4 | F592 A5 | F619 B5 | F646 A7 | F680 A7 | F811 B1 | I013 C1 | I040 A2 | I075 B2 | I111 B1 | I140 B2 | I203 C3 | I240 B8 | I267 A4 | I294 B3 | I363 B7 | I432 A5 | I535 C6 | I562 C7 | I589 C6 | I666 A1 | |
| F197 B4 | F240 B3 | F313 B3 | F388 B7 | F415 B7 | F464 B8 | F492 B8 | F539 A8 | F566 A4 | F593 A5 | F620 B5 | F647 A6 | F681 A6 | F812 A1 | I014 B1 | I041 A2 | I076 C2 | I112 B2 | I141 B2 | I204 A3 | I241 A8 | I268 A4 | I295 B8 | I364 B7 | I433 A5 | I536 C6 | I563 C7 | I590 C7 | I667 B1 | |
| F198 C5 | F241 B3 | F314 B3 | F389 B7 | F416 B7 | F465 B8 | F493 B8 | F540 A7 | F567 B5 | F594 A5 | F621 B4 | F648 A6 | F682 A6 | F813 A1 | I015 B3 | I050 C2 | I077 C1 | I113 B2 | I142 B2 | I205 B2 | I242 A3 | I269 A4 | I296 B5 | I365 C8 | I435 A3 | I537 C6 | I564 C7 | I591 C8 | I668 B1 | |
| F199 C4 | F242 B3 | F315 B2 | F390 B7 | F417 B7 | F466 B8 | F494 B8 | F541 A7 | F568 A5 | F595 A5 | F622 A5 | F649 B7 | F683 A6 | F814 A1 | I016 B5 | I051 C2 | I078 B1 | I114 A2 | I143 B2 | I206 B2 | I243 A3 | I270 B4 | I297 C8 | I366 B7 | I436 A3 | I538 C1 | I565 C2 | I592 C6 | I669 B1 | |



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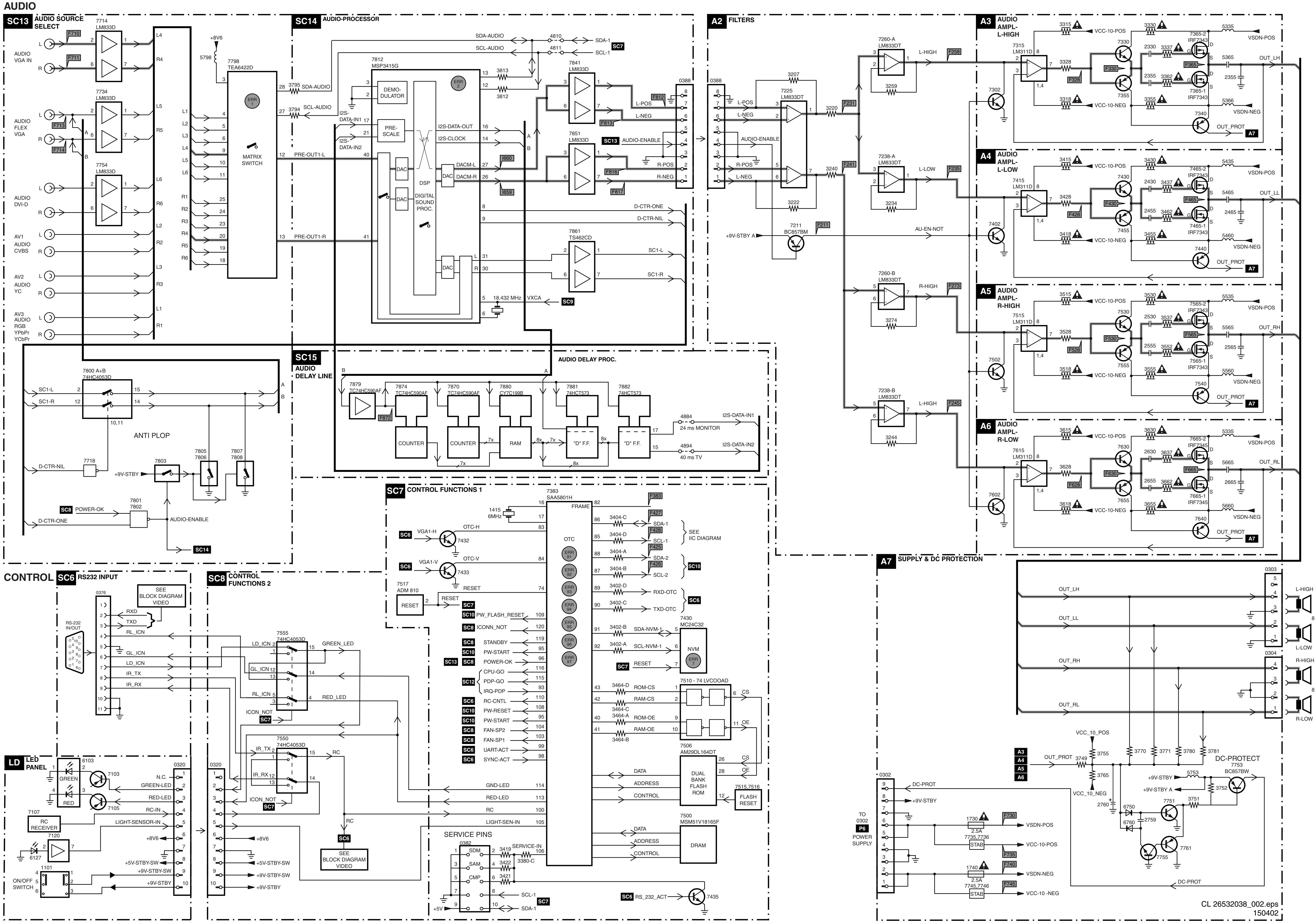
# Block Diagram Audio (FM23 AC/FM24 AB/FM33 AA)


AUDIO
SC13 AUDIO SOURCE SELECT
AUDIO VGA IN
AUDIO FLEX VGA
AUDIO DVI-D
AV1 AUDIO CVBS
AV2 AUDIO YC
AV3 AUDIO RGB YPbPr YCbPr
7714 LM833D
7734 LM833D
7754 LM833D
SC14 AUDIO-PROCESSOR
7798 TEA6422D
MATRIX SWITCH
7812 MSP3415G
DEMO-DULATOR
PRE-SCALE
DSP
DIGITAL SOUND PROC.
DAC
SDA-AUDIO
SCL-AUDIO
PRE-OUT1-L
PRE-OUT1-R
I2S-DATA-IN1
I2S-DATA-IN2
I2S-DATA-OUT
I2S-CLOCK
DACM-L
DACM-R
18.432 MHz
VXCA
7841 LM833D
7851 LM833D
7861 TS462CD
L-POS
L-NEG
R-POS
R-NEG
AUDIO-ENABLE
D-CTR-ONE
D-CTR-NIL
SC1-L
SC1-R
SDA-1
SCL-1
A2 FILTERS
7225 LM833DT
7211 BC857BM
+9V-STBY A
7260-A LM833DT
7238-A LM833DT
7260-B LM833DT
7238-B LM833DT
L-HIGH
L-LOW
R-HIGH
R-LOW
AU-EN-NOT
A3 AUDIO AMPL. L-HIGH
A4 AUDIO AMPL. L-LOW
A5 AUDIO AMPL. R-HIGH
A6 AUDIO AMPL. R-LOW
7315 LM311D
7415 LM311D
7515 LM311D
7615 LM311D
IRF7343
IRF7345
VCC-10-POS
VCC-10-NEG
VSDN-POS
VSDN-NEG
OUT_PROT
OUT_LH
OUT_LL
OUT_RH
OUT_RL
SC15 AUDIO - DELAY LINE
AUDIO DELAY PROC.
7800 A+B 74HC4053D
ANTI PLOP
7879 TC74HC590AF
7874 TC74HC590AF
7870 TC74HC590AF
7880 CY7C199B
7881 74HCT573
7882 74HCT573
COUNTER
RAM
"D" F.F.
24 ms MONITOR
40 ms TV
POWER-OK
+9V-STBY
SC7 CONTROL FUNCTIONS 1
7383 SAA5801H
OTC
FRAME
1415 6MHz
VGA1-H
VGA1-V
7517 ADM 810
RESET
PW_FLASH_RESET
ICONN_NOT
STANDBY
PW-START
CPU-GO
PDP-GO
IRQ-PDP
RC-CNTL
PW-RESET
FAN-SP2
FAN-SP1
UART-ACT
SYNC-ACT
GND-LED
RED-LED
RC
LIGHT-SEN-IN
SEE IIC DIAGRAM
SDA-2
SCL-2
RXD-OTC
TXD-OTC
SDA-NVM-1
SCL-NVM-1
7430 MC24C32
NVM
7510 - 74 LVCOOAD
ROM-CS
RAM-CS
ROM-OE
RAM-OE
7506 AM29DL164DT
DUAL BANK FLASH ROM
7515,7516 FLASH RESET
7500 MSM51V18165F
DRAM
DATA
ADDRESS
CONTROL
SERVICE PINS
SDM
SAM
CMP
SERVICE-IN
RS_232_ACT
7435
CONTROL
SC6 RS232 INPUT
SEE BLOCK DIAGRAM VIDEO
RS-232 IN/OUT
RXD
TXD
RL_ICN
GL_ICN
LD_ICN
IR_TX
IR_RX
SC8 CONTROL FUNCTIONS 2
7555 74HC4053D
7550 74HC4053D
GREEN_LED
RED_LED
ICON_NOT
LD LED PANEL
GREEN
RED
7107 RC RECEIVER
LIGHT-SENSOR-IN
ON/OFF SWITCH
+8V6
+5V-STBY-SW
+9V-STBY-SW
A7 SUPPLY & DC PROTECTION
L-HIGH
L-LOW
R-HIGH
R-LOW
8 Ω
VCC_10_POS
VCC_10_NEG
DC-PROTECT
7753 BC857BW
DC-PROT
TO 0302 P6 POWER SUPPLY
2.5A
STAB
VSDN-POS
VCC-10-POS
VSDN-NEG
VCC-10 -NEG
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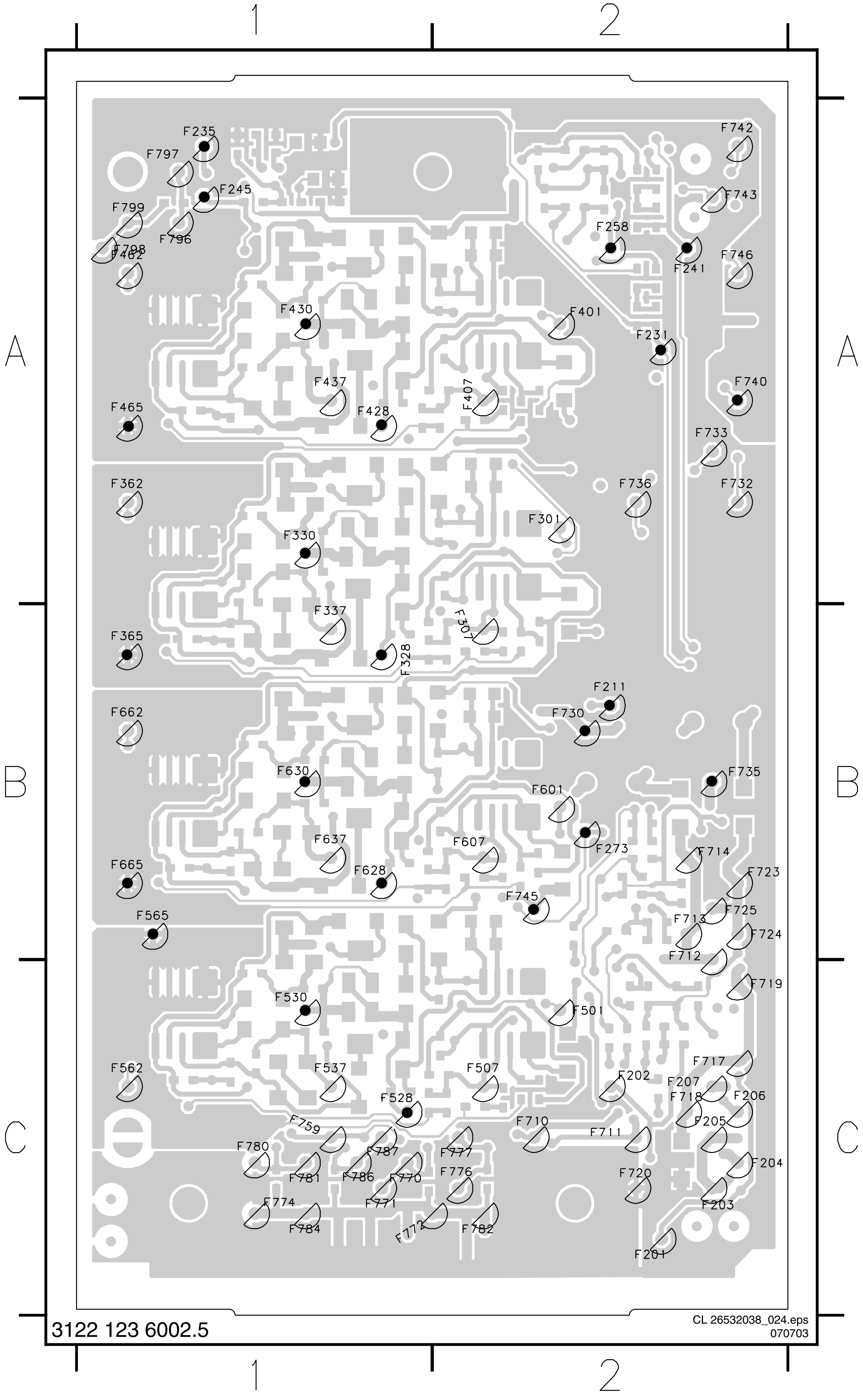
## Testpoint Overview: Audio Amplifier Panel


1
2
A
B
C
F235
F797
F245
F799
F796
F798
F462
F430
F437
F428
F407
F401
F258
F241
F231
F742
F743
F746
F740
F733
F465
F362
F330
F337
F307
F328
F301
F736
F732
F365
F662
F630
F637
F628
F607
F601
F273
F211
F730
F735
F714
F723
F725
F724
F713
F712
F719
F665
F565
F745
F530
F501
F562
F537
F528
F507
F202
F207
F717
F718
F206
F205
F759
F710
F711
F780
F787
F777
F781
F786
F770
F776
F204
F720
F774
F771
F772
F782
F784
F203
F201
3122 123 6002.5
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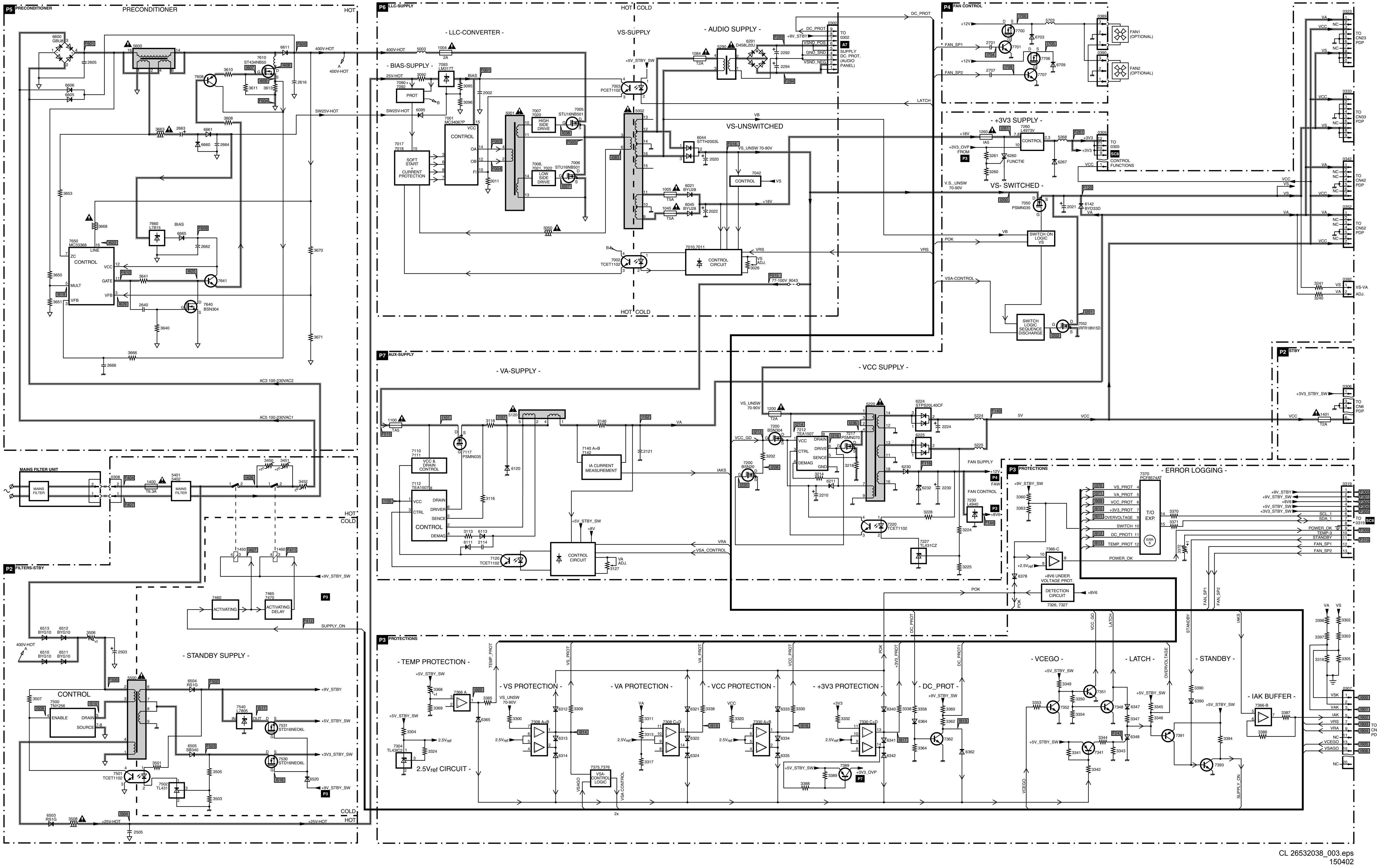
| | | | |
|---|---|---|---|
| F201 | C2 | F718 | C2 |
| F201 | C2 | F718 | C2 |
| F202 | C2 | F719 | C2 |
| F202 | C2 | F719 | C2 |
| F203 | C2 | F720 | C2 |
| F203 | C2 | F720 | C2 |
| F204 | C2 | F723 | B2 |
| F204 | C2 | F723 | B2 |
| F205 | C2 | F724 | B2 |
| F205 | C2 | F724 | B2 |
| F206 | C2 | F725 | B2 |
| F206 | C2 | F725 | B2 |
| F207 | C2 | F730 | B2 |
| F207 | C2 | F730 | B2 |
| F211 | B2 | F732 | A2 |
| F211 | B2 | F732 | A2 |
| F231 | A2 | F733 | A2 |
| F231 | A2 | F733 | A2 |
| F235 | A1 | F735 | B2 |
| F235 | A1 | F735 | B2 |
| F241 | A2 | F736 | A2 |
| F241 | A2 | F736 | A2 |
| F245 | A1 | F740 | A2 |
| F245 | A1 | F740 | A2 |
| F258 | A2 | F742 | A2 |
| F258 | A2 | F742 | A2 |
| F273 | B2 | F743 | A2 |
| F273 | B2 | F743 | A2 |
| F301 | A2 | F745 | B2 |
| F301 | A2 | F745 | B2 |
| F307 | B2 | F746 | A2 |
| F307 | B2 | F746 | A2 |
| F328 | B1 | F759 | C1 |
| F328 | B1 | F759 | C1 |
| F330 | A1 | F770 | C1 |
| F330 | A1 | F770 | C1 |
| F365 | B1 | F771 | C1 |
| F365 | B1 | F771 | C1 |
| F401 | A2 | F772 | C1 |
| F401 | A2 | F772 | C1 |
| F407 | A2 | F774 | C1 |
| F407 | A2 | F774 | C1 |
| F428 | A1 | F776 | C2 |
| F428 | A1 | F776 | C2 |
| F430 | A1 | F777 | C2 |
| F430 | A1 | F777 | C2 |
| F465 | A1 | F780 | C1 |
| F465 | A1 | F780 | C1 |
| F501 | C2 | F781 | C1 |
| F501 | C2 | F781 | C1 |
| F507 | C2 | F782 | C2 |
| F507 | C2 | F782 | C2 |
| F528 | C1 | F784 | C1 |
| F528 | C1 | F784 | C1 |
| F530 | C1 | F786 | C1 |
| F530 | C1 | F786 | C1 |
| F565 | B1 | F787 | C1 |
| F565 | B1 | F787 | C1 |
| F601 | B2 | F796 | A1 |
| F601 | B2 | F796 | A1 |
| F607 | B2 | F797 | A1 |
| F607 | B2 | F797 | A1 |
| F628 | B1 | F798 | A1 |
| F628 | B1 | F798 | A1 |
| F630 | B1 | F799 | A1 |
| F630 | B1 | F799 | A1 |
| F665 | B1 | | |
| F665 | B1 | | |
| F710 | C2 | | |
| F710 | C2 | | |
| F711 | C2 | | |
| F711 | C2 | | |
| F712 | B2 | | |
| F712 | B2 | | |
| F713 | B2 | | |
| F713 | B2 | | |
| F714 | B2 | | |
| F714 | B2 | | |
| F717 | C2 | | |
| F717 | C2 | | |

## *Personal Notes:*

# Block Diagram Power Supply (FM23 AC)


P5 PRECONDITIONER
PRECONDITIONER
HOT
400V-HOT
SW25V-HOT
7650 MC33368
CONTROL
ZC
MULT
VFB
VCC
GATE
7660 L7815
BIAS
7641
7640 BSN304
7610 ST434NB50
7608
AC3 100-230VAC2
AC5 100-230VAC1
MAINS FILTER UNIT
MAINS FILTER
1400 T6.3A
5401 5402 MAINS FILTER
P2 FILTERS-STBY
- STANDBY SUPPLY -
CONTROL
7500 TNY256
ENABLE
DRAIN
SOURCE
7501 TCET1102
7503 TL431
7540 L7805
7531 STD16NE06L
7530 STD16NE06L
+9V_STBY
+5V_STBY_SW
+3V3_STBY_SW
+9V_STBY_SW
SUPPLY_ON
7460 ACTIVATING
7465 7470 ACTIVATING DELAY
+25V-HOT
COLD
P6 LLC-SUPPLY
- LLC-CONVERTER -
- BIAS-SUPPLY -
7093 LM317T
PROT
7001 MC34067P
CONTROL
7017 7018 SOFT START + CURRENT PROTECTION
7007 7020 HIGH SIDE DRIVE
7008, 7021, 7022 LOW SIDE DRIVE
7005 STU16NB501
7006 STU16NB501
HOT COLD
VS-SUPPLY
- AUDIO SUPPLY -
6291 D458L20U
DC_PROT
+9V_STBY
VSND_POS
GND_SND
VSND_NEG
0302 TO 0302 SUPPLY DC. PROT. (AUDIO PANEL)
VS-UNSWITCHED
6044 STTH2003L
VS_UNSW 70-90V
7042 CONTROL
6021 BYU28
6045 BYU28
+18V
7010,7011 CONTROL CIRCUIT
7032 TCET1102
7003 PCET1102
VRS
77-100V
P4 FAN CONTROL
FAN_SP1
FAN_SP2
FAN1 (OPTIONAL)
FAN2 (OPTIONAL)
- +3V3 SUPPLY -
7260 L4973V
CONTROL
+3V3_OVP FROM P3
6260 FUNCTIE
TO 0305 SC8 CONTROL FUNCTIONS
VS- SWITCHED -
V.S._UNSW 70-90V
7050 PSMN035
6142 BYD33D
SWITCH ON LOGIC VS
POK
VSA-CONTROL
SWITCH LOGIC SEQUENCE DISCHARGE
7052 IRFR18N15D
LATCH
TO CN23 PDP
TO CN33 PDP
TO CN42 PDP
TO CN52 PDP
VS-VA ADJ.
P2 STBY
+3V3_STBY_SW
TO CN6 PDP
P7 AUX-SUPPLY
- VA-SUPPLY -
7110 7111 VCC & DRAIN CONTROL
7112 TEA1507
CONTROL
DRAIN
DRIVER
SENCE
DEMAG
7117 PSMN035
7140 A+B 7142 IA CURRENT MEASUREMENT
7120 TCET1102
CONTROL CIRCUIT
VA ADJ.
VA
- VCC SUPPLY -
VS_UNSW 70-90V
7200 BSN304
7212 TEA1507
7217 PSMN070
7220 TCET1102
7227 TL431CZ
6224 STPS20L40CF
FAN SUPPLY
FAN CONTROL
7230 L4940
IAKS
VRA
VSA_CONTROL
P3 PROTECTIONS
- ERROR LOGGING -
7370 PCF8574AT
T/O EXP.
VS_PROT
VA_PROT
VCC_PROT
+3V3_PROT
OVERVOLTAGE
SWITCH
DC_PROT1
TEMP_PROT
POWER_OK
+8V6 UNDER VOLTAGE PROT
DETECTION CIRCUIT
7326, 7327
TO 0319 SC8 CONTROL FUNCTIONS 2
SCL_1
SDA_1
TEMP-3
STANDBY
P3 PROTECTIONS
- TEMP PROTECTION -
- VS PROTECTION -
- VA PROTECTION -
- VCC PROTECTION -
- +3V3 PROTECTION -
- DC_PROT -
2.5Vref CIRCUIT -
7304 TL431C2
7375,7376 VSA CONTROL LOGIC
- VCEGO -
- LATCH -
- STANDBY -
- IAK BUFFER -
TO CN7 PDP
VSK
VAK
IAK
VRS
VRA
VCEGO
VSAGO

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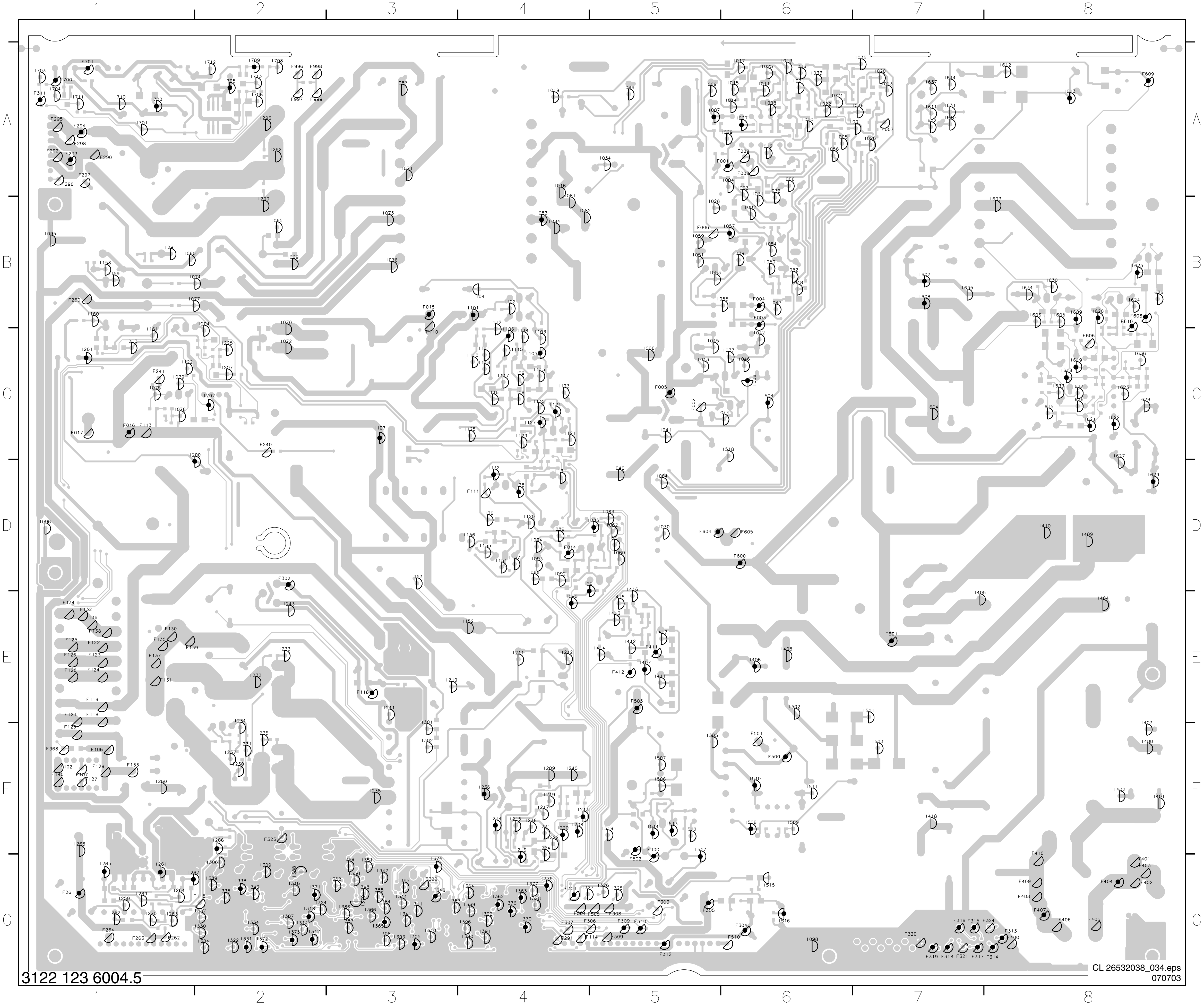
# Testpoint Overview Power Supply (FM23AC)



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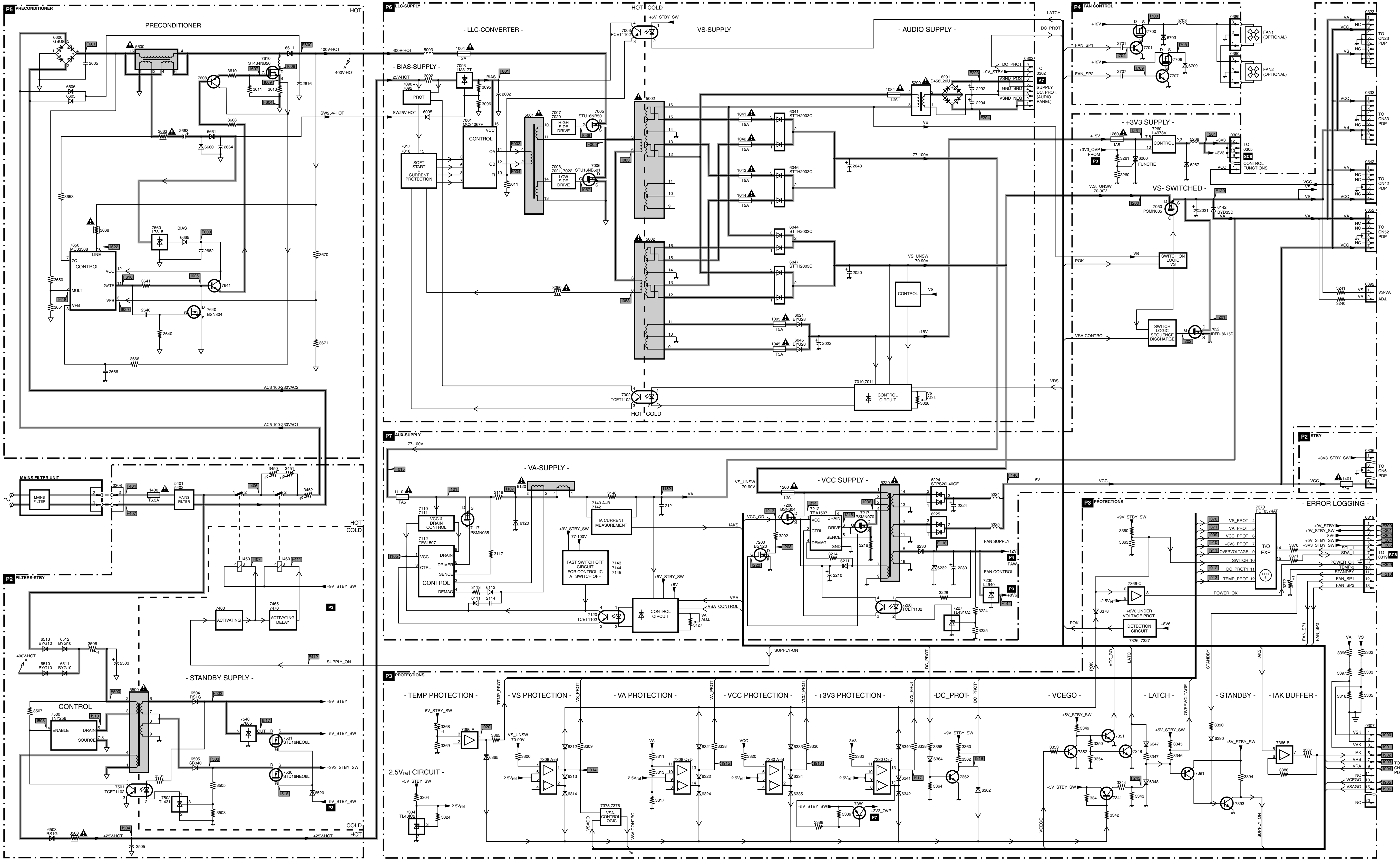
| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| F001 | A6 | I007 | A6 | I075 | C2 | I204 | B2 | I325 | G5 | I501 | E7 | I904 | G7 |
| F002 | C6 | I007 | A6 | I075 | C2 | I204 | B2 | I325 | G5 | I501 | E7 | I905 | G7 |
| F003 | B6 | I008 | A6 | I076 | B4 | I207 | C2 | I326 | G5 | I502 | E7 | I906 | G8 |
| F004 | B6 | I008 | A6 | I076 | B4 | I207 | C2 | I326 | G5 | I502 | E7 | | |
| F005 | C6 | I009 | A6 | I077 | B2 | I208 | F5 | I327 | G5 | I503 | F7 | | |
| F006 | B6 | I009 | A6 | I077 | B2 | I208 | F5 | I327 | G5 | I503 | F7 | | |
| F007 | A7 | I010 | A7 | I078 | C2 | I209 | F5 | I330 | G2 | I504 | C6 | | |
| F008 | A6 | I010 | A7 | I078 | C2 | I209 | F5 | I330 | G2 | I504 | C6 | | |
| F009 | A6 | I011 | A6 | I079 | C2 | I210 | E4 | I331 | G2 | I505 | F6 | | |
| F014 | D5 | I011 | A6 | I079 | C2 | I210 | E4 | I331 | G2 | I505 | F6 | | |
| F015 | B4 | I012 | A6 | I080 | B2 | I211 | E5 | I332 | G2 | I506 | F6 | | |
| F016 | C2 | I012 | A6 | I080 | B2 | I211 | E5 | I332 | G2 | I506 | F6 | | |
| F017 | C1 | I013 | A7 | I081 | A5 | I212 | E5 | I334 | G3 | I507 | F6 | | |
| F102 | F1 | I013 | A7 | I081 | A5 | I212 | E5 | I334 | G3 | I507 | F6 | | |
| F106 | F1 | I014 | A6 | I082 | B5 | I213 | F5 | I335 | G2 | I508 | F6 | | |
| F107 | F1 | I014 | A6 | I082 | B5 | I213 | F5 | I335 | G2 | I508 | F6 | | |
| F110 | B4 | I015 | A6 | I083 | B5 | I214 | F4 | I338 | G2 | I509 | F7 | | |
| F111 | D4 | I015 | A6 | I083 | B5 | I214 | F4 | I338 | G2 | I509 | F7 | | |
| F113 | C2 | I016 | A5 | I084 | B5 | I215 | F5 | I339 | G4 | I510 | F6 | | |
| F114 | G5 | I016 | A5 | I084 | B5 | I215 | F5 | I339 | G4 | I510 | F6 | | |
| F115 | G2 | I017 | A6 | I085 | D5 | I216 | F5 | I341 | G4 | I511 | F7 | | |
| F116 | E3 | I017 | A6 | I085 | D5 | I216 | F5 | I341 | G4 | I511 | F7 | | |
| F118 | E1 | I018 | A7 | I088 | D5 | I217 | F5 | I342 | G3 | I512 | F6 | | |
| F119 | E1 | I018 | A7 | I088 | D5 | I217 | F5 | I342 | G3 | I512 | F6 | | |
| F120 | F1 | I019 | A5 | I089 | D5 | I218 | F5 | I344 | G4 | I513 | F6 | | |
| F121 | E1 | I019 | A5 | I089 | D5 | I218 | F5 | I344 | G4 | I513 | F6 | | |
| F122 | E1 | I020 | A7 | I090 | D5 | I219 | F5 | I345 | G4 | I514 | F6 | | |
| F123 | E1 | I020 | A7 | I090 | E5 | I219 | F5 | I345 | G4 | I514 | F6 | | |
| F124 | E1 | I021 | A7 | I091 | D5 | I220 | F5 | I347 | G4 | I515 | G6 | | |
| F125 | E1 | I021 | A7 | I091 | D5 | I220 | F5 | I347 | G4 | I515 | G6 | | |
| F126 | E1 | I022 | A7 | I092 | D5 | I221 | F5 | I348 | G3 | I516 | G7 | | |
| F127 | F1 | I022 | A7 | I092 | D5 | I221 | F5 | I348 | G3 | I516 | G7 | | |
| F128 | E1 | I023 | A7 | I093 | D5 | I222 | F5 | I349 | F3 | I517 | F6 | | |
| F129 | F1 | I023 | A7 | I093 | D5 | I222 | F5 | I349 | G3 | I517 | F6 | | |
| F130 | E2 | I024 | A7 | I094 | D5 | I224 | F5 | I350 | G3 | I518 | C6 | | |
| F131 | E2 | I024 | A7 | I094 | D5 | I224 | F5 | I350 | G3 | I518 | C6 | | |
| F132 | E1 | I025 | A6 | I095 | B1 | I225 | C2 | I351 | F3 | I603 | A8 | | |
| F133 | F2 | I025 | A6 | I095 | B1 | I225 | C2 | I351 | G3 | I603 | A8 | | |
| F134 | E1 | I026 | A7 | I096 | D1 | I230 | F2 | I352 | G3 | I604 | C8 | | |
| F135 | E2 | I026 | A7 | I096 | D1 | I230 | F2 | I352 | G3 | I604 | C8 | | |
| F136 | E1 | I027 | A6 | I098 | G7 | I231 | F2 | I362 | G4 | I605 | B9 | | |
| F137 | E2 | I027 | A6 | I098 | G7 | I231 | F2 | I362 | G4 | I605 | B9 | | |
| F138 | E1 | I028 | A6 | I101 | B4 | I232 | E3 | I363 | G5 | I606 | B8 | | |
| F139 | E2 | I028 | B6 | I101 | B4 | I232 | E3 | I363 | G5 | I606 | B8 | | |
| F140 | F1 | I029 | A6 | I102 | B4 | I233 | E3 | I364 | G4 | I607 | B8 | | |
| F260 | B1 | I029 | A6 | I102 | B4 | I233 | E3 | I364 | G4 | I607 | B8 | | |
| F261 | G1 | I030 | D6 | I103 | B5 | I234 | E2 | I365 | G4 | I608 | B8 | | |
| F262 | G2 | I030 | D6 | I103 | C5 | I234 | E2 | I365 | G4 | I608 | B8 | | |
| F263 | G2 | I031 | A6 | I104 | B4 | I235 | F3 | I366 | G3 | I609 | B9 | | |
| F264 | G1 | I031 | A6 | I104 | B4 | I235 | F3 | I366 | G3 | I609 | B9 | | |
| F290 | A1 | I032 | A6 | I105 | C5 | I236 | F4 | I367 | G4 | I610 | A8 | | |
| F291 | G5 | I032 | A6 | I105 | C5 | I236 | F4 | I367 | G4 | I610 | A8 | | |
| F292 | A1 | I033 | A7 | I106 | B4 | I237 | F2 | I370 | G5 | I611 | A8 | | |
| F293 | A1 | I033 | A7 | I106 | B4 | I237 | F2 | I370 | G5 | I611 | A8 | | |
| F294 | A1 | I034 | A5 | I107 | C3 | I238 | F3 | I371 | G3 | I612 | A8 | | |
| F295 | A1 | I034 | A5 | I107 | C3 | I238 | F3 | I371 | G3 | I612 | A8 | | |
| F296 | A1 | I035 | A7 | I108 | C5 | I240 | F5 | I372 | G3 | I613 | A8 | | |
| F297 | A1 | I035 | A7 | I108 | C5 | I240 | F5 | I372 | G3 | I613 | A8 | | |
| F298 | A1 | I036 | A7 | I109 | C5 | I241 | E4 | I373 | G3 | I614 | A9 | | |
| F300 | F6 | I036 | A7 | I109 | C5 | I241 | E4 | I373 | G3 | I614 | A9 | | |
| F301 | G5 | I037 | C6 | I110 | C4 | I243 | E3 | I374 | F4 | I615 | C9 | | |
| F302 | D3 | I037 | C6 | I110 | C4 | I243 | E3 | I374 | G4 | I615 | C9 | | |
| F303 | G6 | I038 | C6 | I111 | C4 | I260 | F2 | I375 | G5 | I616 | C9 | | |
| F304 | G6 | I038 | C6 | I111 | C4 | I260 | F2 | I375 | G5 | I616 | C9 | | |
| F305 | G6 | I039 | B6 | I112 | B4 | I261 | G2 | I376 | G4 | I617 | C9 | | |
| F306 | G5 | I039 | B6 | I112 | B4 | I261 | G2 | I376 | G4 | I617 | C9 | | |
| F307 | G5 | I040 | C5 | I113 | C5 | I262 | G1 | I377 | G5 | I618 | C9 | | |
| F308 | G5 | I040 | D5 | I113 | C5 | I262 | G1 | I377 | G5 | I618 | C9 | | |
| F309 | G5 | I041 | C6 | I114 | B5 | I263 | G2 | I378 | G5 | I619 | C9 | | |
| F310 | G5 | I041 | C6 | I114 | B5 | I263 | G2 | I378 | G5 | I619 | C9 | | |
| F311 | A1 | I042 | B6 | I115 | C4 | I264 | G2 | I380 | G3 | I620 | B9 | | |
| F312 | G6 | I042 | C6 | I115 | C4 | I264 | G2 | I380 | G3 | I620 | B9 | | |
| F313 | G8 | I043 | C6 | I116 | C4 | I265 | G1 | I383 | G3 | I621 | C9 | | |
| F314 | G8 | I043 | C6 | I116 | C4 | I265 | G1 | I383 | G3 | I621 | C9 | | |
| F315 | G8 | I044 | C6 | I117 | C4 | I266 | F2 | I384 | G3 | I622 | C9 | | |
| F316 | G8 | I044 | C6 | I117 | C4 | I266 | F2 | I384 | G3 | I622 | C9 | | |
| F317 | G8 | I045 | C6 | I118 | C4 | I267 | G2 | I385 | G3 | I623 | C9 | | |
| F318 | G8 | I045 | C6 | I118 | C4 | I267 | G2 | I385 | G3 | I623 | C9 | | |
| F319 | G8 | I046 | C6 | I120 | D5 | I268 | F1 | I386 | G3 | I624 | B9 | | |
| F320 | G8 | I046 | C6 | I120 | D5 | I268 | F1 | I386 | G3 | I624 | B9 | | |
| F321 | G8 | I047 | B6 | I121 | C5 | I269 | G2 | I387 | G3 | I625 | B9 | | |
| F322 | G4 | I047 | B6 | I121 | C5 | I269 | G2 | I387 | G3 | I625 | B9 | | |
| F323 | F3 | I048 | B7 | I122 | C2 | I270 | G2 | I388 | G3 | I626 | B9 | | |
| F343 | G4 | I048 | B7 | I122 | C2 | I270 | G2 | I388 | G3 | I626 | B9 | | |
| F368 | F1 | I049 | A5 | I123 | C5 | I290 | A3 | I389 | G2 | I627 | C9 | | |
| F400 | G8 | I049 | A5 | I123 | C5 | I290 | A3 | I389 | G2 | I627 | C9 | | |
| F401 | F9 | I050 | B6 | I124 | C5 | I291 | B2 | I390 | G4 | I628 | C9 | | |
| F402 | G9 | I050 | B6 | I124 | C5 | I291 | B2 | I390 | G4 | I628 | C9 | | |
| F403 | G9 | I051 | B6 | I125 | C4 | I292 | A3 | I391 | G4 | I629 | D9 | | |
| F404 | G9 | I051 | B6 | I125 | C4 | I292 | A3 | I391 | G4 | I629 | D9 | | |
| F405 | G9 | I052 | B7 | I126 | D4 | I293 | A3 | I392 | G4 | I630 | B9 | | |
| F406 | G9 | I052 | B7 | I126 | D4 | I293 | A3 | I392 | G4 | I630 | B9 | | |
| F407 | G9 | I053 | B6 | I127 | C5 | I300 | E2 | I396 | G4 | I631 | A8 | | |
| F408 | G8 | I053 | B6 | I127 | C5 | I300 | E2 | I396 | G4 | I631 | A8 | | |
| F409 | G8 | I054 | B6 | I128 | D5 | I301 | E4 | I400 | F9 | I632 | A8 | | |
| F410 | F8 | I054 | B6 | I128 | D5 | I301 | E4 | I400 | F9 | I632 | A8 | | |
| F411 | E6 | I055 | B6 | I129 | C5 | I302 | F4 | I401 | F9 | I633 | C9 | | |
| F412 | E5 | I055 | B6 | I129 | C5 | I302 | F4 | I401 | F9 | I633 | C9 | | |
| F500 | F7 | I056 | A7 | I131 | D5 | I303 | G4 | I402 | F9 | I634 | B8 | | |
| F501 | F6 | I056 | A7 | I131 | D5 | I303 | G4 | I402 | F9 | I634 | B8 | | |
| F502 | F5 | I057 | B6 | I132 | C4 | I304 | G2 | I403 | E9 | I635 | B8 | | |
| F503 | E5 | I057 | B6 | I132 | D4 | I304 | G2 | I403 | E9 | I635 | B8 | | |
| F504 | G5 | I059 | B6 | I135 | C5 | I305 | G4 | I404 | D9 | I636 | C9 | | |
| F505 | G5 | I059 | B6 | I135 | C5 | I305 | G4 | I404 | E9 | I636 | C9 | | |
| F509 | G5 | I060 | D5 | I152 | E4 | I306 | G3 | I405 | D8 | I700 | A2 | | |
| F510 | G6 | I060 | D5 | I152 | E4 | I306 | G3 | I405 | D8 | I700 | A2 | | |
| F600 | D6 | I061 | D5 | I153 | D4 | I307 | G3 | I406 | E6 | I701 | A2 | | |
| F601 | E7 | I061 | D5 | I153 | D4 | I307 | G3 | I406 | E6 | I701 | A2 | | |
| F604 | D6 | I062 | D5 | I154 | D4 | I308 | G4 | I407 | E5 | I703 | A1 | | |
| F605 | D6 | I062 | D5 | I154 | D4 | I308 | G4 | I407 | E5 | I703 | A1 | | |
| F606 | C9 | I063 | D5 | I155 | D4 | I309 | G3 | I408 | E7 | I704 | A1 | | |
| F608 | B9 | I063 | D5 | I155 | D4 | I309 | G3 | I408 | E7 | I704 | A1 | | |
| F609 | A9 | I064 | D6 | I156 | D4 | I310 | G4 | I409 | D9 | I705 | A2 | | |
| F610 | B9 | I064 | D6 | I156 | D4 | I310 | G4 | I409 | D9 | I705 | A2 | | |
| F700 | A1 | I065 | B3 | I157 | D5 | I311 | G4 | I410 | D9 | I706 | A3 | | |
| F701 | A1 | I065 | B3 | I157 | D5 | I311 | G4 | I410 | D9 | I706 | A3 | | |
| F996 | A3 | I066 | C6 | I158 | B1 | I312 | G3 | I411 | E6 | I708 | A3 | | |
| F997 | A3 | I066 | C6 | I158 | B1 | I312 | G3 | I411 | E6 | I708 | A3 | | |
| F998 | A3 | I067 | A4 | I159 | B1 | I313 | G3 | I412 | E5 | I709 | A3 | | |
| F999 | A3 | I067 | A4 | I159 | B1 | I313 | G3 | I412 | E5 | I709 | A3 | | |
| I001 | A7 | I069 | B3 | I160 | B1 | I314 | G3 | I413 | E5 | I710 | A2 | | |
| I001 | A7 | I069 | B3 | I160 | B1 | I314 | G3 | I413 | E5 | I710 | A2 | | |
| I002 | B6 | I070 | B3 | I161 | B2 | I315 | G3 | I414 | E5 | I711 | A1 | | |
| I002 | B6 | I070 | B3 | I161 | B2 | I315 | G3 | I414 | E5 | I711 | A1 | | |
| I003 | A6 | I071 | A4 | I200 | C2 | I316 | G3 | I415 | D5 | I712 | A2 | | |
| I003 | A6 | I071 | A4 | I200 | C2 | I316 | G3 | I415 | E5 | I712 | A2 | | |
| I004 | A6 | I072 | C3 | I201 | C1 | I318 | G3 | I416 | D5 | I713 | A3 | | |
| I004 | A6 | I072 | C3 | I201 | C1 | I318 | G3 | I416 | D5 | I713 | A3 | | |
| I005 | A7 | I073 | B4 | I202 | C2 | I322 | G2 | I417 | E6 | I900 | G7 | | |
| I005 | A7 | I073 | B4 | I202 | C2 | I322 | G2 | I417 | E6 | I901 | G7 | | |
| I006 | A7 | I074 | B2 | I203 | C2 | I324 | G3 | I418 | F8 | I902 | G7 | | |
| I006 | A7 | I074 | B2 | I203 | C2 | I324 | G3 | I418 | F8 | I903 | G7 | | |

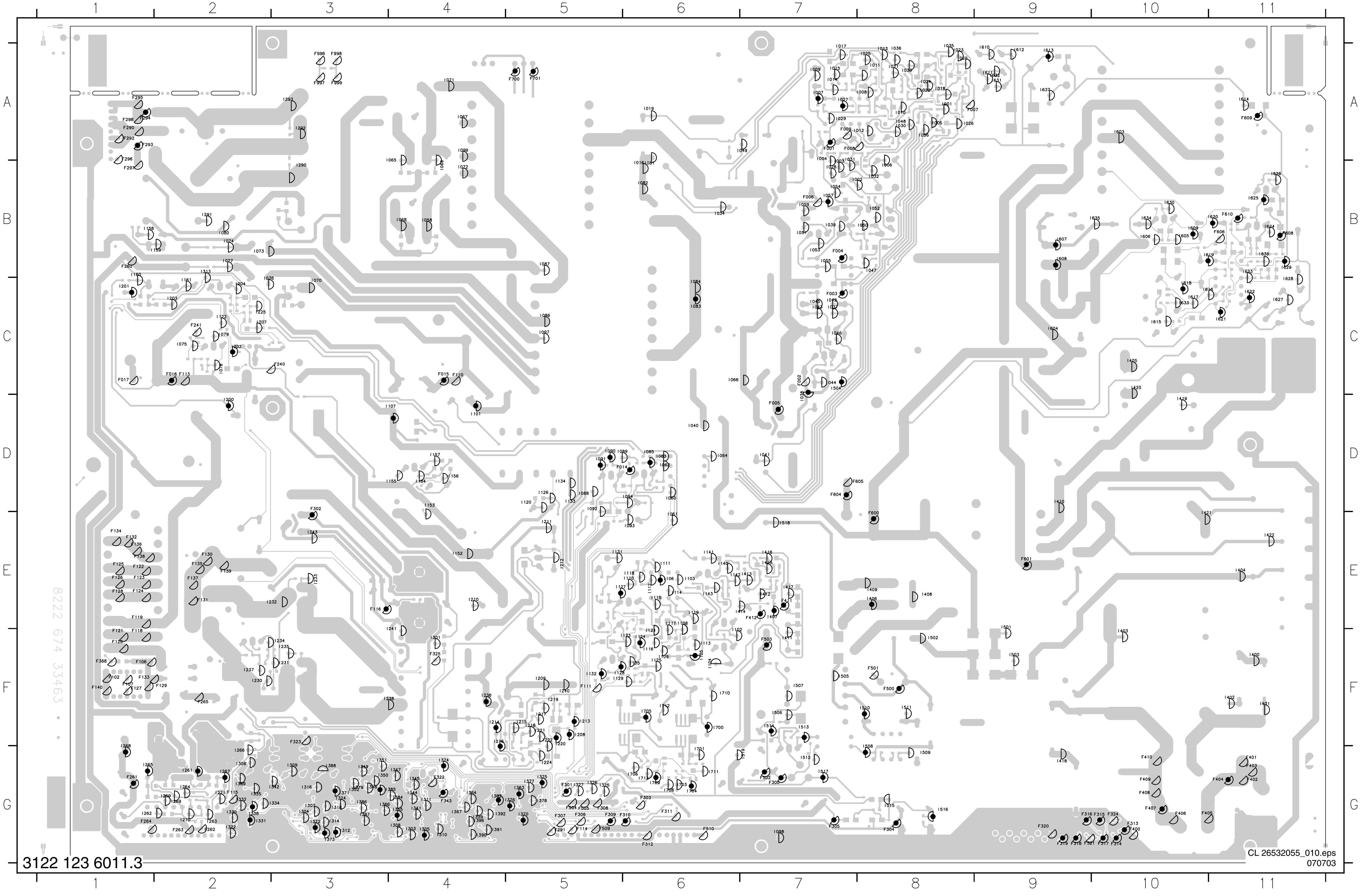
# Block Diagram Power Supply (FM24 AB/FM33 AA)


P5 PRECONDITIONER
PRECONDITIONER
HOT
P6 LLC-SUPPLY
- LLC-CONVERTER -
- BIAS-SUPPLY -
VS-SUPPLY
- AUDIO SUPPLY -
P4 FAN CONTROL
FAN1 (OPTIONAL)
FAN2 (OPTIONAL)
- +3V3 SUPPLY -
VS- SWITCHED -
CONTROL
SOFT START + CURRENT PROTECTION
HIGH SIDE DRIVE
LOW SIDE DRIVE
PROT
SWITCH ON LOGIC VS
SWITCH LOGIC SEQUENCE DISCHARGE
CONTROL CIRCUIT
HOT COLD
MAINS FILTER UNIT
MAINS FILTER
P2 FILTERS-STBY
P7 AUX-SUPPLY
- VA-SUPPLY -
- VCC SUPPLY -
VCC & DRAIN CONTROL
IA CURRENT MEASUREMENT
FAST SWITCH OFF CIRCUIT FOR CONTROL IC AT SWITCH OFF
ACTIVATING
ACTIVATING DELAY
- STANDBY SUPPLY -
P2 STBY
P3 PROTECTIONS
- ERROR LOGGING -
T/O EXP.
DETECTION CIRCUIT
+8V6 UNDER VOLTAGE PROT.
- TEMP PROTECTION -
- VS PROTECTION -
- VA PROTECTION -
- VCC PROTECTION -
- +3V3 PROTECTION -
-DC_PROT-
- VCEGO -
- LATCH -
- STANDBY -
- IAK BUFFER -
2.5Vref CIRCUIT -
VSA CONTROL LOGIC
TO CN23 PDP
TO CN33 PDP
TO CN42 PDP
TO CN52 PDP
TO CN6 PDP
TO CN7 PDP
TO 0302 SUPPLY DC. PROT. (AUDIO PANEL)
TO 0305 CONTROL FUNCTIONS
TO 0319 CONTROL FUNCTIONS 2
COLD
HOT

CL 26532055_011.eps
030502

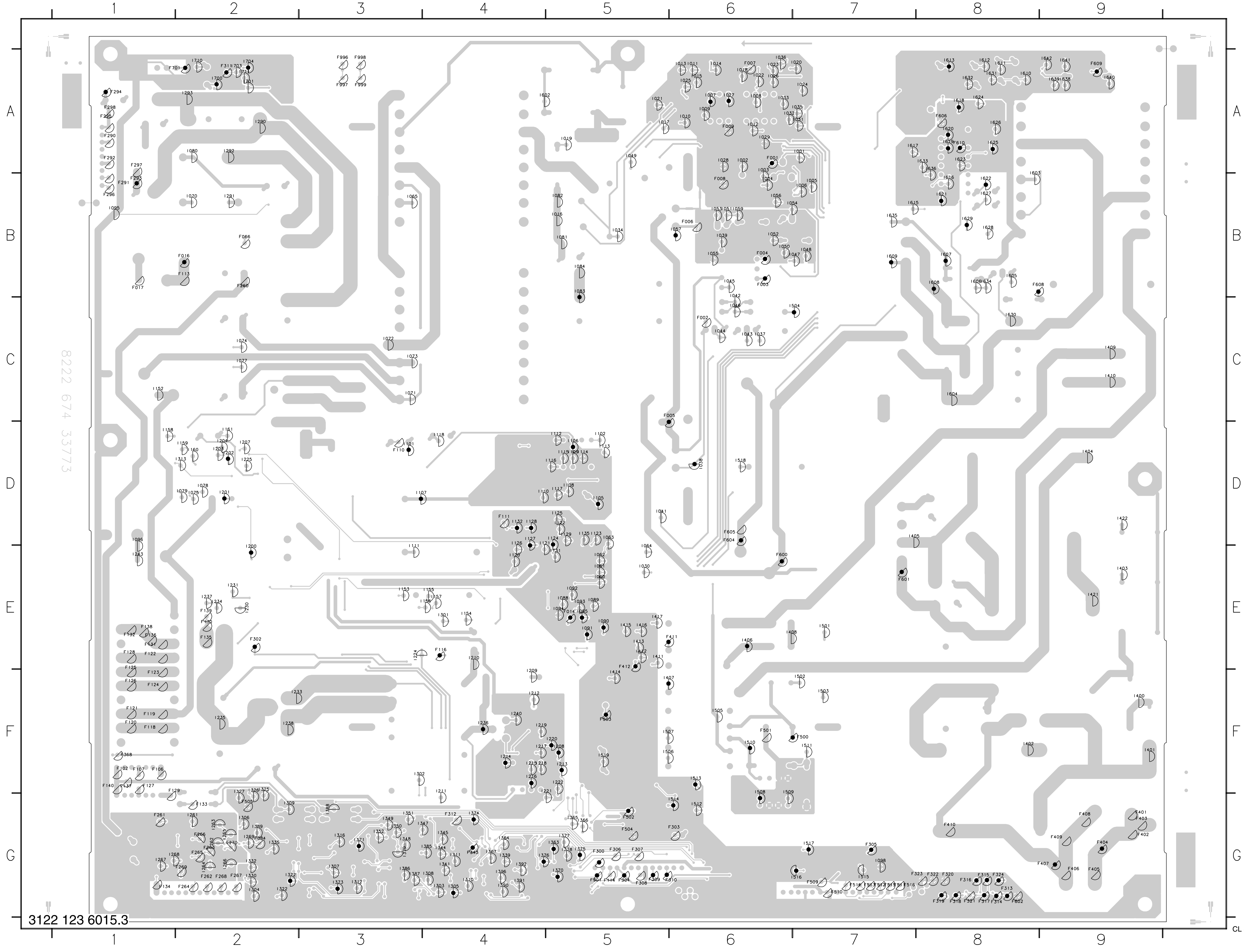
# Testpoint Overview: Power Supply (FM24 AB)

| | |
|---|---|
| F001 | A7 |
| F002 | C7 |
| F003 | C7 |
| F004 | B7 |
| F005 | D7 |
| F006 | B7 |
| F007 | A8 |
| F008 | A8 |
| F009 | A7 |
| F014 | D6 |
| F015 | C4 |
| F016 | C2 |
| F017 | C1 |
| F102 | F1 |
| F106 | F1 |
| F107 | F1 |
| F110 | C4 |
| F111 | F5 |
| F113 | C2 |
| F114 | G5 |
| F115 | G2 |
| F116 | E3 |
| F118 | F1 |
| F119 | E1 |
| F120 | F1 |
| F121 | F1 |
| F122 | E1 |
| F123 | E1 |
| F124 | E1 |
| F125 | E1 |
| F126 | E1 |
| F127 | F1 |
| F128 | E1 |
| F129 | F1 |
| F130 | E2 |
| F131 | E2 |
| F132 | E1 |
| F133 | F1 |
| F134 | E1 |
| F135 | E2 |
| F136 | E1 |
| F137 | E2 |
| F138 | E1 |
| F139 | E2 |
| F140 | F1 |
| F240 | C2 |
| F241 | C2 |
| F260 | B1 |
| F261 | G1 |
| F262 | G2 |
| F263 | G2 |
| F264 | G1 |
| F265 | F2 |
| F290 | A1 |
| F291 | G5 |
| F292 | A1 |
| F293 | A1 |
| F294 | A1 |
| F295 | A1 |
| F296 | A1 |
| F297 | B1 |
| F298 | A1 |
| F300 | G7 |
| F301 | G5 |
| F302 | E3 |
| F303 | G6 |
| F304 | G8 |
| F305 | G7 |
| F306 | G5 |
| F307 | G5 |
| F308 | G5 |
| F309 | G5 |
| F310 | G6 |
| F311 | G6 |
| F312 | G6 |
| F313 | G10 |
| F314 | G10 |
| F315 | G10 |
| F316 | G9 |
| F317 | G10 |
| F318 | G9 |
| F319 | G9 |
| F320 | G9 |
| F321 | G9 |
| F322 | G4 |
| F323 | F3 |
| F324 | G10 |
| F325 | F4 |
| F343 | G4 |
| F368 | F1 |
| F400 | G10 |
| F401 | G11 |
| F402 | G11 |
| F403 | G11 |
| F404 | G11 |
| F405 | G10 |
| F406 | G10 |
| F407 | G10 |
| F408 | G10 |
| F409 | G10 |
| F410 | G10 |
| F411 | E7 |
| F412 | E7 |
| F500 | F8 |
| F501 | F8 |
| F502 | G7 |
| F503 | F7 |
| F504 | G5 |
| F505 | G5 |
| F509 | G5 |
| F510 | G6 |
| F600 | E8 |
| F601 | E9 |
| F604 | D7 |
| F605 | D7 |
| F606 | B11 |
| F608 | B11 |
| F609 | A11 |
| F610 | B11 |
| F700 | A5 |
| F701 | A5 |
| F996 | A3 |
| F997 | A3 |
| F998 | A3 |
| F999 | A3 |
| I001 | A8 |
| I002 | B8 |
| I003 | B7 |
| I004 | B7 |
| I005 | A8 |
| I006 | A8 |
| I007 | A7 |
| I008 | A8 |
| I009 | A7 |
| I010 | A8 |
| I011 | A8 |
| I012 | A8 |
| I013 | A8 |
| I014 | A7 |
| I015 | A7 |
| I016 | B6 |
| I017 | A7 |
| I018 | A8 |
| I019 | A6 |
| I020 | A8 |
| I021 | A8 |
| I022 | A8 |
| I023 | A8 |
| I024 | A8 |
| I025 | A8 |
| I026 | A8 |
| I027 | A7 |
| I028 | B7 |
| I029 | A7 |
| I030 | A8 |
| I031 | B7 |
| I032 | B8 |
| I033 | A8 |
| I034 | B6 |
| I035 | A8 |
| I036 | A8 |
| I037 | C7 |
| I038 | C7 |
| I039 | B7 |
| I040 | D6 |
| I041 | D7 |
| I042 | C7 |
| I043 | C7 |
| I044 | C7 |
| I045 | C7 |
| I046 | C7 |
| I047 | B8 |
| I048 | A8 |
| I049 | A7 |
| I050 | B8 |
| I051 | B7 |
| I052 | B8 |
| I053 | B7 |
| I054 | B7 |
| I055 | B7 |
| I056 | A8 |
| I057 | B7 |
| I058 | B4 |
| I059 | B7 |
| I060 | D6 |
| I061 | E6 |
| I062 | D6 |
| I063 | D6 |
| I064 | D6 |
| I065 | A4 |
| I066 | C7 |
| I067 | A4 |
| I068 | B4 |
| I069 | A4 |
| I070 | C3 |
| I071 | A4 |
| I072 | B4 |
| I073 | B2 |
| I074 | B2 |
| I075 | C2 |
| I076 | C2 |
| I077 | B2 |
| I078 | C2 |
| I079 | C2 |
| I080 | B2 |
| I081 | A6 |
| I082 | B6 |
| I083 | C6 |
| I084 | C6 |
| I085 | D6 |
| I086 | C5 |
| I087 | B5 |
| I088 | D5 |
| I089 | D5 |
| I090 | D5 |
| I091 | D5 |
| I092 | D5 |
| I093 | E6 |
| I094 | D6 |
| I097 | C5 |
| I098 | G7 |
| I099 | A4 |
| I101 | D4 |
| I102 | F6 |
| I103 | E6 |
| I104 | F6 |
| I105 | F6 |
| I106 | E6 |
| I107 | D4 |
| I108 | F6 |
| I109 | F6 |
| I110 | E6 |
| I111 | E6 |
| I112 | E6 |
| I113 | F6 |
| I114 | E6 |
| I115 | E6 |
| I116 | F6 |
| I117 | F6 |
| I118 | E6 |
| I119 | E6 |
| I120 | D5 |
| I121 | F6 |
| I122 | C2 |
| I123 | F6 |
| I124 | F6 |
| I125 | F6 |
| I126 | D5 |
| I127 | E5 |
| I128 | F5 |
| I129 | F6 |
| I131 | E5 |
| I132 | F5 |
| I133 | D5 |
| I134 | D5 |
| I135 | F6 |
| I140 | E6 |
| I141 | E6 |
| I142 | E6 |
| I143 | E6 |
| I152 | E4 |
| I153 | E4 |
| I154 | D4 |
| I155 | D4 |
| I156 | D4 |
| I157 | D4 |
| I158 | B1 |
| I159 | B2 |
| I160 | C1 |
| I161 | C2 |
| I200 | D2 |
| I201 | C1 |
| I202 | C2 |
| I203 | C2 |
| I204 | C2 |
| I207 | C2 |
| I208 | F5 |
| I209 | F5 |
| I210 | E4 |
| I211 | E5 |
| I212 | E5 |
| I213 | F5 |
| I214 | F4 |
| I215 | F5 |
| I216 | G4 |
| I217 | F5 |
| I218 | F5 |
| I219 | F5 |
| I220 | F5 |
| I221 | F5 |
| I222 | G5 |
| I224 | G5 |
| I225 | C2 |
| I230 | F2 |
| I231 | F3 |
| I232 | E3 |
| I233 | E3 |
| I234 | F2 |
| I235 | F3 |
| I236 | F4 |
| I237 | F2 |
| I238 | F4 |
| I240 | F5 |
| I241 | F4 |
| I243 | E3 |
| I259 | G2 |
| I261 | G2 |
| I262 | G2 |
| I263 | G2 |
| I264 | G2 |
| I265 | G1 |
| I266 | G2 |
| I267 | G2 |
| I268 | G1 |
| I269 | G2 |
| I270 | G2 |
| I271 | G2 |
| I290 | B3 |
| I291 | B2 |
| I292 | A3 |
| I293 | A3 |
| I301 | F4 |
| I303 | G4 |
| I304 | G3 |
| I305 | G4 |
| I306 | G2 |
| I307 | G3 |
| I308 | G4 |
| I309 | G3 |
| I310 | G4 |
| I311 | G4 |
| I312 | G3 |
| I313 | C2 |
| I314 | G3 |
| I316 | G3 |
| I318 | G3 |
| I322 | G2 |
| I324 | G3 |
| I325 | G5 |
| I326 | G5 |
| I327 | G5 |
| I330 | G2 |
| I331 | G2 |
| I332 | G2 |
| I334 | G2 |
| I335 | G2 |
| I338 | G2 |
| I339 | G4 |
| I341 | G4 |
| I342 | G3 |
| I344 | G4 |
| I345 | G4 |
| I347 | G4 |
| I348 | G3 |
| I349 | G3 |
| I350 | G3 |
| I351 | G3 |
| I352 | G3 |
| I362 | G4 |
| I363 | G5 |
| I364 | G4 |
| I365 | G4 |
| I366 | G3 |
| I367 | G4 |
| I370 | G5 |
| I371 | G3 |
| I372 | G3 |
| I373 | G3 |
| I374 | G4 |
| I375 | G5 |
| I376 | G5 |
| I377 | G5 |
| I378 | G5 |
| I379 | G3 |
| I384 | G4 |
| I385 | G4 |
| I386 | G3 |
| I387 | G3 |
| I388 | G3 |
| I389 | G2 |
| I390 | G4 |
| I391 | G4 |
| I392 | G4 |
| I396 | G4 |
| I400 | F11 |
| I401 | F11 |
| I402 | F11 |
| I403 | F10 |
| I404 | E11 |
| I405 | C10 |
| I406 | E8 |
| I407 | E7 |
| I408 | E8 |
| I409 | E8 |
| I410 | D9 |
| I411 | F7 |
| I412 | E7 |
| I413 | E7 |
| I414 | E6 |
| I415 | E7 |
| I416 | E7 |
| I417 | E7 |
| I418 | G9 |
| I419 | D10 |
| I420 | C10 |
| I421 | E10 |
| I422 | E11 |
| I501 | F9 |
| I502 | F8 |
| I503 | F9 |
| I504 | C7 |
| I505 | F7 |
| I506 | F7 |
| I507 | F7 |
| I508 | G8 |
| I509 | G8 |
| I510 | F8 |
| I511 | F8 |
| I512 | G7 |
| I513 | F7 |
| I514 | F7 |
| I515 | G8 |
| I516 | G8 |
| I517 | G7 |
| I518 | E7 |
| I519 | G6 |
| I603 | A10 |
| I604 | C9 |
| I605 | B10 |
| I606 | B10 |
| I607 | B9 |
| I608 | B9 |
| I609 | B10 |
| I610 | A9 |
| I611 | A9 |
| I612 | A9 |
| I613 | A9 |
| I614 | A11 |
| I615 | C10 |
| I616 | C11 |
| I617 | C10 |
| I618 | C10 |
| I619 | B10 |
| I620 | B11 |
| I621 | C11 |
| I622 | C11 |
| I623 | C11 |
| I624 | B11 |
| I625 | B11 |
| I626 | B11 |
| I627 | C11 |
| I628 | C11 |
| I629 | B11 |
| I630 | B10 |
| I631 | A9 |
| I632 | A9 |
| I633 | C10 |
| I634 | B10 |
| I635 | B10 |
| I636 | B11 |
| I637 | A9 |
| I700 | F6 |
| I701 | G6 |
| I703 | G6 |
| I704 | G6 |
| I705 | F6 |
| I706 | G6 |
| I708 | G6 |
| I709 | G6 |
| I710 | F6 |
| I711 | G6 |
| I712 | F6 |
| I713 | G6 |



## Testpoint Overview: Power Supply (FM33 AA)

| | |
|---|---|
| F001 | A6 |
| F002 | C6 |
| F003 | B6 |
| F004 | B6 |
| F005 | C5 |
| F006 | B6 |
| F007 | A6 |
| F008 | B6 |
| F009 | A6 |
| F014 | E5 |
| F016 | B2 |
| F017 | B1 |
| F066 | B2 |
| F102 | F1 |
| F106 | F1 |
| F107 | F1 |
| F110 | D3 |
| F111 | D4 |
| F113 | B2 |
| F114 | G5 |
| F116 | E4 |
| F118 | F1 |
| F119 | F1 |
| F120 | F1 |
| F121 | F1 |
| F122 | E1 |
| F123 | E1 |
| F124 | F1 |
| F125 | E1 |
| F126 | F1 |
| F127 | F1 |
| F128 | E1 |
| F129 | F1 |
| F130 | E2 |
| F131 | E1 |
| F132 | E1 |
| F133 | G2 |
| F134 | G1 |
| F135 | E2 |
| F136 | E1 |
| F137 | F1 |
| F138 | E1 |
| F139 | E2 |
| F140 | F1 |
| F260 | B2 |
| F261 | G1 |
| F262 | G2 |
| F263 | G2 |
| F264 | G2 |
| F265 | G2 |
| F266 | G2 |
| F267 | G2 |
| F268 | G2 |
| F269 | G2 |
| F270 | G2 |
| F290 | A1 |
| F291 | B1 |
| F292 | A1 |
| F293 | A1 |
| F294 | A1 |
| F295 | A1 |
| F296 | B1 |
| F297 | A1 |
| F298 | A1 |
| F300 | G5 |
| F301 | G5 |
| F302 | E2 |
| F303 | G6 |
| F304 | G5 |
| F305 | G7 |
| F306 | G5 |
| F307 | G5 |
| F308 | G5 |
| F309 | G5 |
| F310 | G6 |
| F311 | A2 |
| F312 | G4 |
| F313 | G8 |
| F314 | G8 |
| F315 | G8 |
| F316 | G8 |
| F317 | G8 |
| F318 | G8 |
| F319 | G8 |
| F320 | G8 |
| F321 | G8 |
| F322 | G8 |
| F323 | G7 |
| F324 | G8 |
| F343 | G4 |
| F368 | F1 |
| F384 | G2 |
| F401 | G9 |
| F402 | G9 |
| F403 | G9 |
| F404 | G9 |
| F405 | G9 |
| F406 | G9 |
| F407 | G9 |
| F408 | G9 |
| F409 | G9 |
| F410 | G8 |
| F411 | E6 |
| F412 | E5 |
| F500 | F7 |
| F501 | F6 |
| F502 | G5 |
| F503 | F5 |
| F504 | G5 |
| F505 | G2 |
| F509 | G7 |
| F510 | G7 |
| F511 | G7 |
| F512 | G7 |
| F513 | G7 |
| F514 | G7 |
| F515 | G7 |
| F516 | G7 |
| F600 | E6 |
| F601 | E7 |
| F602 | G8 |
| F604 | D6 |
| F605 | D6 |
| F606 | A8 |
| F608 | B8 |
| F609 | A9 |
| F610 | A8 |
| F701 | A2 |
| F996 | A3 |
| F997 | A3 |
| F998 | A3 |
| F999 | A3 |
| I001 | A7 |
| I002 | A6 |
| I003 | A6 |
| I004 | B6 |
| I005 | B7 |
| I006 | B7 |
| I007 | A6 |
| I008 | A6 |
| I009 | A6 |
| I010 | A6 |
| I011 | A6 |
| I012 | A6 |
| I013 | A6 |
| I014 | A6 |
| I015 | A6 |
| I016 | B5 |
| I017 | A5 |
| I018 | A6 |
| I019 | A5 |
| I020 | A7 |
| I021 | A5 |
| I022 | A6 |
| I023 | A6 |
| I024 | A7 |
| I025 | A6 |
| I026 | A6 |
| I027 | A6 |
| I028 | A6 |
| I029 | A6 |
| I030 | E5 |
| I031 | A7 |
| I032 | A6 |
| I033 | A6 |
| I034 | B5 |
| I035 | A7 |
| I036 | A6 |
| I037 | C6 |
| I038 | D6 |
| I039 | B6 |
| I041 | D5 |
| I042 | B6 |
| I043 | C6 |
| I044 | C6 |
| I045 | B6 |
| I046 | C6 |
| I047 | B6 |
| I048 | B7 |
| I049 | A5 |
| I050 | B6 |
| I051 | B6 |
| I052 | B6 |
| I053 | B6 |
| I054 | B6 |
| I055 | B6 |
| I056 | B6 |
| I057 | B6 |
| I059 | B6 |
| I060 | E5 |
| I061 | E5 |
| I062 | E5 |
| I063 | D5 |
| I064 | D5 |
| I065 | B3 |
| I070 | B2 |
| I071 | C3 |
| I072 | C3 |
| I073 | C3 |
| I074 | C2 |
| I075 | D2 |
| I077 | C2 |
| I078 | D2 |
| I079 | D2 |
| I080 | A2 |
| I081 | B5 |
| I082 | B5 |
| I083 | B5 |
| I084 | B5 |
| I085 | E5 |
| I088 | E5 |
| I089 | E5 |
| I090 | E5 |
| I091 | E5 |
| I092 | E5 |
| I093 | E5 |
| I094 | E5 |
| I095 | B1 |
| I096 | D1 |
| I098 | G7 |
| I101 | D3 |
| I102 | D5 |
| I105 | D5 |
| I106 | D5 |
| I107 | D3 |
| I108 | D5 |
| I109 | D5 |
| I110 | D4 |
| I111 | D3 |
| I112 | D5 |
| I113 | D5 |
| I114 | D5 |
| I115 | D5 |
| I116 | D5 |
| I117 | D5 |
| I118 | D4 |
| I120 | E4 |
| I121 | D4 |
| I122 | D5 |
| I123 | D5 |
| I124 | D5 |
| I125 | D5 |
| I126 | D4 |
| I127 | D4 |
| I128 | D4 |
| I129 | D5 |
| I131 | E5 |
| I132 | D4 |
| I135 | D5 |
| I152 | C1 |
| I153 | E3 |
| I154 | E4 |
| I155 | E4 |
| I156 | E4 |
| I157 | E4 |
| I158 | D1 |
| I159 | D2 |
| I160 | D2 |
| I161 | D2 |
| I200 | D2 |
| I201 | D2 |
| I202 | D2 |
| I203 | D2 |
| I204 | D2 |
| I207 | D2 |
| I208 | F5 |
| I209 | E4 |
| I210 | E4 |
| I211 | F4 |
| I212 | F4 |
| I213 | F5 |
| I214 | F4 |
| I215 | F4 |
| I216 | F4 |
| I217 | F4 |
| I218 | F4 |
| I219 | F4 |
| I220 | F5 |
| I221 | F4 |
| I222 | F5 |
| I224 | E3 |
| I225 | D2 |
| I230 | E2 |
| I231 | E2 |
| I233 | F2 |
| I234 | E2 |
| I235 | F2 |
| I236 | F4 |
| I237 | E2 |
| I238 | F2 |
| I240 | F4 |
| I243 | E1 |
| I261 | G2 |
| I262 | G2 |
| I263 | G2 |
| I264 | G2 |
| I265 | G2 |
| I266 | G2 |
| I267 | G1 |
| I268 | G1 |
| I269 | G2 |
| I290 | A2 |
| I291 | B2 |
| I292 | A2 |
| I293 | A2 |
| I301 | E4 |
| I302 | F3 |
| I303 | G4 |
| I304 | G2 |
| I305 | G4 |
| I306 | G2 |
| I307 | G3 |
| I308 | G4 |
| I309 | G2 |
| I310 | G4 |
| I311 | G4 |
| I312 | G3 |
| I313 | D2 |
| I316 | G3 |
| I322 | G2 |
| I325 | F2 |
| I326 | F2 |
| I327 | F2 |
| I330 | G2 |
| I332 | G2 |
| I335 | G2 |
| I339 | G4 |
| I341 | G4 |
| I344 | G4 |
| I345 | G4 |
| I347 | G4 |
| I348 | G3 |
| I349 | G3 |
| I350 | G3 |
| I351 | G3 |
| I352 | G3 |
| I363 | G5 |
| I364 | G4 |
| I365 | G5 |
| I366 | G5 |
| I367 | G4 |
| I370 | G5 |
| I371 | G3 |
| I372 | G2 |
| I373 | G3 |
| I374 | G4 |
| I375 | G5 |
| I376 | G4 |
| I377 | G5 |
| I378 | G5 |
| I379 | G3 |
| I385 | G4 |
| I386 | G3 |
| I387 | G3 |
| I388 | G3 |
| I389 | G2 |
| I390 | G4 |
| I391 | G4 |
| I392 | G4 |
| I396 | G4 |
| I400 | F9 |
| I401 | F9 |
| I402 | F8 |
| I403 | E9 |
| I404 | D9 |
| I405 | D7 |
| I406 | E6 |
| I407 | F5 |
| I408 | E6 |
| I409 | C9 |
| I410 | C9 |
| I411 | E5 |
| I412 | E5 |
| I413 | E5 |
| I414 | E5 |
| I415 | E5 |
| I416 | E5 |
| I417 | E5 |
| I421 | E9 |
| I422 | D9 |
| I501 | E7 |
| I502 | F7 |
| I503 | F7 |
| I504 | C6 |
| I505 | F6 |
| I506 | F5 |
| I507 | F5 |
| I508 | F6 |
| I509 | F6 |
| I510 | F6 |
| I511 | F7 |
| I512 | G6 |
| I513 | F6 |
| I514 | G6 |
| I515 | G7 |
| I516 | G7 |
| I517 | G7 |
| I518 | D6 |
| I519 | F5 |
| I602 | A4 |
| I603 | A8 |
| I604 | C8 |
| I605 | B8 |
| I606 | B8 |
| I607 | B8 |
| I608 | B8 |
| I609 | B7 |
| I610 | A8 |
| I611 | A8 |
| I612 | A8 |
| I613 | A8 |
| I615 | B7 |
| I616 | A8 |
| I617 | A7 |
| I618 | A8 |
| I619 | A8 |
| I620 | A8 |
| I621 | B8 |
| I622 | B8 |
| I623 | A8 |
| I624 | A8 |
| I625 | A8 |
| I626 | A8 |
| I627 | B8 |
| I628 | B8 |
| I629 | B8 |
| I630 | C8 |
| I631 | A8 |
| I632 | A8 |
| I633 | A8 |
| I634 | B8 |
| I635 | B7 |
| I636 | A8 |
| I638 | A9 |
| I639 | A9 |
| I640 | A9 |
| I641 | A9 |
| I642 | A9 |
| I700 | A2 |
| I701 | A2 |
| I703 | A2 |
| I704 | A2 |
| I710 | A2 |
| I711 | A2 |



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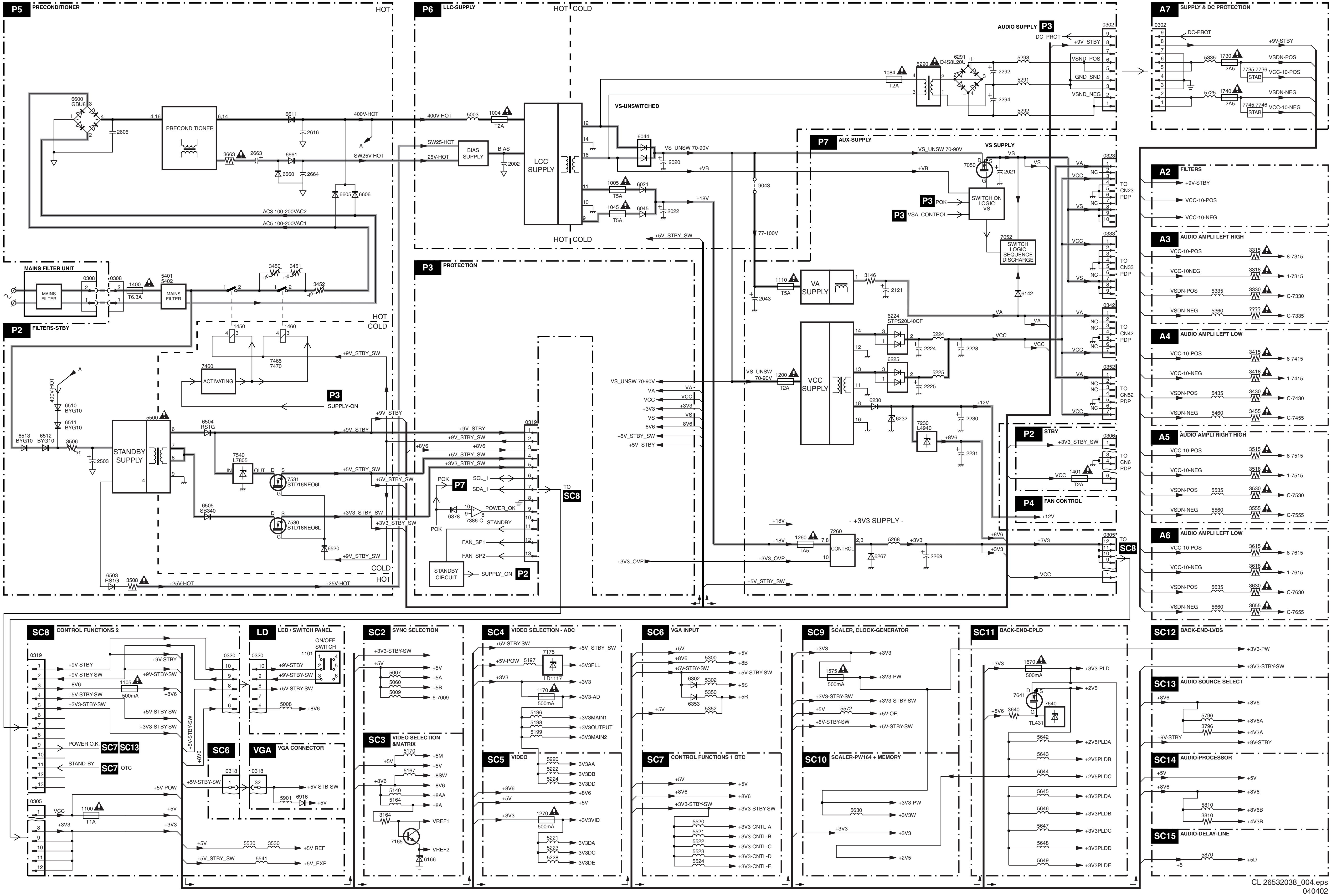
## Power Lines Overview (FM23 AC)


P5 PRECONDITIONER
HOT
6600 GBU8J
2605
PRECONDITIONER
4,16
6,14
6611
2616
400V-HOT
3663
2663
6661
SW25V-HOT
6660
2664
6605
6606
AC3 100-200VAC2
AC5 100-200VAC1
P6 LLC-SUPPLY
HOT
COLD
400V-HOT
5003
1004
T2A
SW25-HOT
25V-HOT
BIAS SUPPLY
BIAS
2002
LCC SUPPLY
VS-UNSWITCHED
6044
VS_UNSW 70-90V
2020
+VB
1005
T5A
6021
1045
T5A
6045
+18V
2022
+5V_STBY_SW
AUDIO SUPPLY P3
DC_PROT
+9V_STBY
0302
1084
T2A
5290
6291 D4S8L20U
2292
2294
5293
5291
5292
VSND_POS
GND_SND
VSND_NEG
A7 SUPPLY & DC PROTECTION
DC-PROT
+9V-STBY
5335
1730
2A5
VSDN-POS
7735,7736 STAB
VCC-10-POS
5725
1740
2A5
VSDN-NEG
7745,7746 STAB
VCC-10-NEG
P7 AUX-SUPPLY
VS SUPPLY
7050
2021
VS
VA
VCC
NC
0323
TO CN23 PDP
P3 POK
SWITCH ON LOGIC VS
P3 VSA_CONTROL
7052 SWITCH LOGIC SEQUENCE DISCHARGE
9043
77-100V
1110
T5A
VA SUPPLY
3146
2121
2043
6142
6224 STPS20L40CF
5224
2224
2228
VCC SUPPLY
6225
5225
2225
VS_UNSW 70-90V
1200
T2A
6230
+12V
6232
7230 L4940
+8V6
2230
2231
0333
TO CN33 PDP
0342
TO CN42 PDP
0352
TO CN52 PDP
A2 FILTERS
+9V-STBY
VCC-10-POS
VCC-10-NEG
A3 AUDIO AMPLI LEFT HIGH
3315
8-7315
3318
1-7315
3330
C-7330
5360
C-7335
A4 AUDIO AMPLI LEFT LOW
3415
8-7415
3418
1-7415
5435
3430
C-7430
5460
3455
C-7455
A5 AUDIO AMPLI RIGHT HIGH
3515
8-7515
3518
1-7515
5535
3530
C-7530
5560
3555
C-7555
A6 AUDIO AMPLI LEFT LOW
3615
8-7615
3618
1-7615
5635
3630
C-7630
5660
3655
C-7655
P2 STBY
+3V3_STBY_SW
0306
TO CN6 PDP
1401
T2A
P4 FAN CONTROL
+12V
- +3V3 SUPPLY -
1260
IA5
7260 CONTROL
5268
+3V3
6267
2269
+3V3_OVP
0305
TO SC8
MAINS FILTER UNIT
MAINS FILTER
0308
1400
T6.3A
5401 5402
3450
3451
3452
P2 FILTERS-STBY
HOT
COLD
1450
1460
7460 ACTIVATING
7465 7470
+9V_STBY_SW
P3 SUPPLY-ON
400V-HOT
A
6510 BYG10
6511 BYG10
6513 BYG10
6512 BYG10
3506
2503
STANDBY SUPPLY
5500
6504 RS1G
+9V_STBY
7540 L7805
7531 STD16NEO6L
+5V_STBY_SW
6505 SB340
7530 STD16NEO6L
+3V3_STBY_SW
6520
6503 RS1G
3508
+25V-HOT
P3 PROTECTION
0319
+8V6
SCL_1
SDA_1
POK P7
POWER_OK
STANDBY
6378
7386-C
FAN_SP1
FAN_SP2
STANDBY CIRCUIT
SUPPLY_ON P2
TO SC8
SC8 CONTROL FUNCTIONS 2
0320
1105
500mA
POWER O.K. SC7 SC13
STAND-BY SC7 OTC
+5V-POW
1100
T1A
LD LED / SWITCH PANEL
ON/OFF SWITCH
1101
5008
SC6
VGA VGA CONNECTOR
0318
+5V-STB-SW
5901
6916
5530
+5V REF
5541
+5V_EXP
SC2 SYNC SELECTION
+3V3-STBY-SW
5007
5060
5009
+5A
+5B
6-7009
SC3 VIDEO SELECTION &MATRIX
5170
5167
5140
5164
3164
7165
VREF1
VREF2
6166
SC4 VIDEO SELECTION - ADC
+5V-STBY-SW
+5V-POW
5197
7175
LD1117
+3V3PLL
1170
500mA
+3V3-AD
5196
5198
5199
+3V3MAIN1
+3V3OUTPUT
+3V3MAIN2
SC5 VIDEO
5220
5222
5224
3V3AA
3V3DB
3V3DD
1270
500mA
+3V3VID
5221
5223
5228
3V3DA
3V3DC
3V3DE
SC6 VGA INPUT
5300
6302
5302
5350
6353
5352
+8B
+5S
+5R
SC7 CONTROL FUNCTIONS 1 OTC
5520
5521
5522
5523
5524
+3V3-CNTL-A
+3V3-CNTL-B
+3V3-CNTL-C
+3V3-CNTL-D
+3V3-CNTL-E
SC9 SCALER, CLOCK-GENERATOR
1575
500mA
+3V3-PW
5572
+5V-OE
SC10 SCALER-PW164 + MEMORY
5630
+3V3W
+2V5
SC11 BACK-END-EPLD
1670
500mA
+3V3-PLD
7641
3640
7640 TL431
5642
5643
5644
5645
5646
5647
5648
5649
+2V5PLDA
+2V5PLDB
+2V5PLDC
+3V3PLDA
+3V3PLDB
+3V3PLDC
+3V3PLDD
+3V3PLDE
SC12 BACK-END-LVDS
+3V3-PW
+3V3-STBY-SW
SC13 AUDIO SOURCE SELECT
5796
3796
+8V6A
+4V3A
+9V-STBY
SC14 AUDIO-PROCESSOR
5810
3810
+8V6B
+4V3B
SC15 AUDIO-DELAY-LINE
5870
+5D

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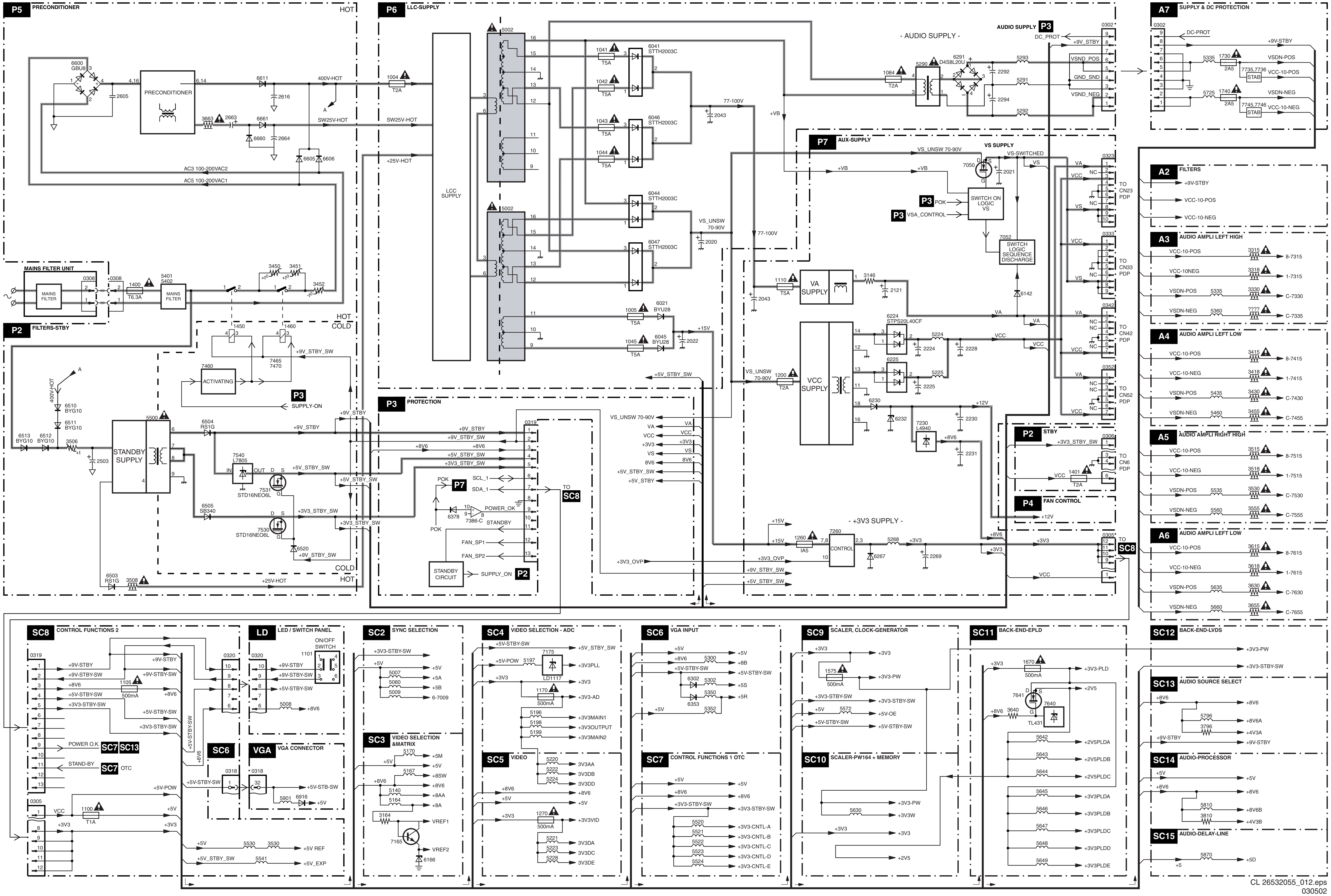
## Power Lines Overview (FM24 AB/FM33 AA)


P5 PRECONDITIONER
HOT
PRECONDITIONER
6600 GBU8
2605
6611
2616
400V-HOT
3663
2663
6661
SW25V-HOT
6660
2664
6605
6606
AC3 100-200VAC2
AC5 100-200VAC1
MAINS FILTER UNIT
MAINS FILTER
0308
1400
T6.3A
5401
5402
3450
3451
3452
P2 FILTERS-STBY
HOT
COLD
1450
1460
7465
7470
7460
ACTIVATING
+9V_STBY_SW
P3 SUPPLY-ON
400V-HOT
6510 BYG10
6511 BYG10
6513 BYG10
6512 BYG10
3506
2503
5500
STANDBY SUPPLY
6504 RS1G
+9V_STBY
7540 L7805
+5V_STBY_SW
7531 STD16NEO6L
6505 SB340
+3V3_STBY_SW
7530 STD16NEO6L
6520
6503 RS1G
3508
+25V-HOT
COLD
HOT
P6 LLC-SUPPLY
1004 T2A
SW25V-HOT
+25V-HOT
LCC SUPPLY
5002
1041 T5A
6041 STTH2003C
1042 T5A
1043 T5A
6046 STTH2003C
1044 T5A
77-100V
2043
+VB
6044 STTH2003C
VS_UNSW 70-90V
2020
6047 STTH2003C
77-100V
1005 T5A
6021 BYU28
+15V
1045 T5A
6045 BYU28
2022
+5V_STBY_SW
- AUDIO SUPPLY -
AUDIO SUPPLY P3
DC_PROT
+9V_STBY
VSND_POS
GND_SND
VSND_NEG
0302
1084 T2A
5290
6291 D4S8L20U
2292
2294
5293
5291
5292
P7 AUX-SUPPLY
VS_UNSW 70-90V
VS SUPPLY
VS-SWITCHED
7050
2021
+VB
P3 POK
P3 VSA_CONTROL
SWITCH ON LOGIC VS
7052 SWITCH LOGIC SEQUENCE DISCHARGE
6142
1110 T5A
VA SUPPLY
3146
2121
2043
6224 STPS20L40CF
5224
2224
2228
6225
5225
2225
1200 T2A
VCC SUPPLY
6230
+12V
6232
7230 L4940
+8V6
2230
2231
- +3V3 SUPPLY -
+15V
1260 1A5
7260 CONTROL
5268
+3V3
6267
2269
+3V3_OVP
+9V_STBY_SW
+5V_STBY_SW
0323 TO CN23 PDP
0333 TO CN33 PDP
0342 TO CN42 PDP
0352 TO CN52 PDP
P2 STBY
+3V3_STBY_SW
0306 TO CN6 PDP
1401 T2A
P4 FAN CONTROL
+12V
0305 TO SC8
P3 PROTECTION
VS_UNSW 70-90V
VA
VCC
+3V3
VS
8V6
+5V_STBY_SW
+5V_STBY
0319
+9V_STBY
+9V_STBY_SW
+8V6
+5V_STBY_SW
+3V3_STBY_SW
POK P7
SCL_1
SDA_1
POWER_OK
STANDBY
6378
7386-C
FAN_SP1
FAN_SP2
STANDBY CIRCUIT
SUPPLY_ON P2
TO SC8
A7 SUPPLY & DC PROTECTION
0302
DC-PROT
+9V-STBY
5335
1730 2A5
7735,7736 STAB
VSDN-POS
VCC-10-POS
5725
1740 2A5
7745,7746 STAB
VSDN-NEG
VCC-10-NEG
A2 FILTERS
+9V-STBY
VCC-10-POS
VCC-10-NEG
A3 AUDIO AMPLI LEFT HIGH
VCC-10-POS 3315 8-7315
VCC-10NEG 3318 1-7315
VSDN-POS 5335 3330 C-7330
VSDN-NEG 5360 ???? C-7335
A4 AUDIO AMPLI LEFT LOW
VCC-10-POS 3415 8-7415
VCC-10-NEG 3418 1-7415
VSDN-POS 5435 3430 C-7430
VSDN-NEG 5460 3455 C-7455
A5 AUDIO AMPLI RIGHT HIGH
VCC-10-POS 3515 8-7515
VCC-10-NEG 3518 1-7515
VSDN-POS 5535 3530 C-7530
VSDN-NEG 5560 3555 C-7555
A6 AUDIO AMPLI LEFT LOW
VCC-10-POS 3615 8-7615
VCC-10-NEG 3618 1-7615
VSDN-POS 5635 3630 C-7630
VSDN-NEG 5660 3655 C-7655
SC8 CONTROL FUNCTIONS 2
0319
+9V-STBY
+9V-STBY-SW
+8V6
1105 500mA
+5V-STBY-SW
+3V3-STBY-SW
POWER O.K. SC7 SC13
STAND-BY SC7 OTC
+5V-POW
0305
VCC
1100 T1A
+5V
+3V3
0320
SC6
0318
+5V-STBY-SW
LD LED / SWITCH PANEL
ON/OFF SWITCH
1101
5008
+8V6
VGA VGA CONNECTOR
0318
+5V-STB-SW
5901
6916
+5V
5530
3530
+5V REF
+5V_STBY_SW
5541
+5V_EXP
SC2 SYNC SELECTION
+3V3-STBY-SW
5007
5060
5009
+5A
+5B
6-7009
SC3 VIDEO SELECTION &MATRIX
5170
+5M
5167
+8SW
5140
5164
+8AA
+8A
3164
VREF1
7165
VREF2
6166
SC4 VIDEO SELECTION - ADC
+5V-STBY-SW
+5V_STBY_SW
+5V-POW
5197
7175
LD1117
+3V3PLL
1170 500mA
+3V3-AD
5196
5198
5199
+3V3MAIN1
+3V3OUTPUT
+3V3MAIN2
SC5 VIDEO
5220
5222
5224
3V3AA
3V3DB
3V3DD
1270 500mA
+3V3VID
5221
5223
5228
3V3DA
3V3DC
3V3DE
SC6 VGA INPUT
5300
+8B
+5V-STBY-SW
6302
5302
+5S
5350
6353
+5R
5352
SC7 CONTROL FUNCTIONS 1 OTC
+3V3-STBY-SW
5520
5521
5522
5523
5524
+3V3-CNTL-A
+3V3-CNTL-B
+3V3-CNTL-C
+3V3-CNTL-D
+3V3-CNTL-E
SC9 SCALER, CLOCK-GENERATOR
1575 500mA
+3V3-PW
5572
+5V-OE
+5V-STBY-SW
SC10 SCALER-PW164 + MEMORY
5630
+3V3W
+2V5
SC11 BACK-END-EPLD
1670 500mA
+3V3-PLD
7641
+2V5
3640
7640 TL431
5642 +2V5PLDA
5643 +2V5PLDB
5644 +2V5PLDC
5645 +3V3PLDA
5646 +3V3PLDB
5647 +3V3PLDC
5648 +3V3PLDD
5649 +3V3PLDE
SC12 BACK-END-LVDS
+3V3-PW
+3V3-STBY-SW
SC13 AUDIO SOURCE SELECT
5796
3796
+8V6A
+4V3A
+9V-STBY
SC14 AUDIO-PROCESSOR
5810
3810
+8V6B
+4V3B
SC15 AUDIO-DELAY-LINE
5870
+5D

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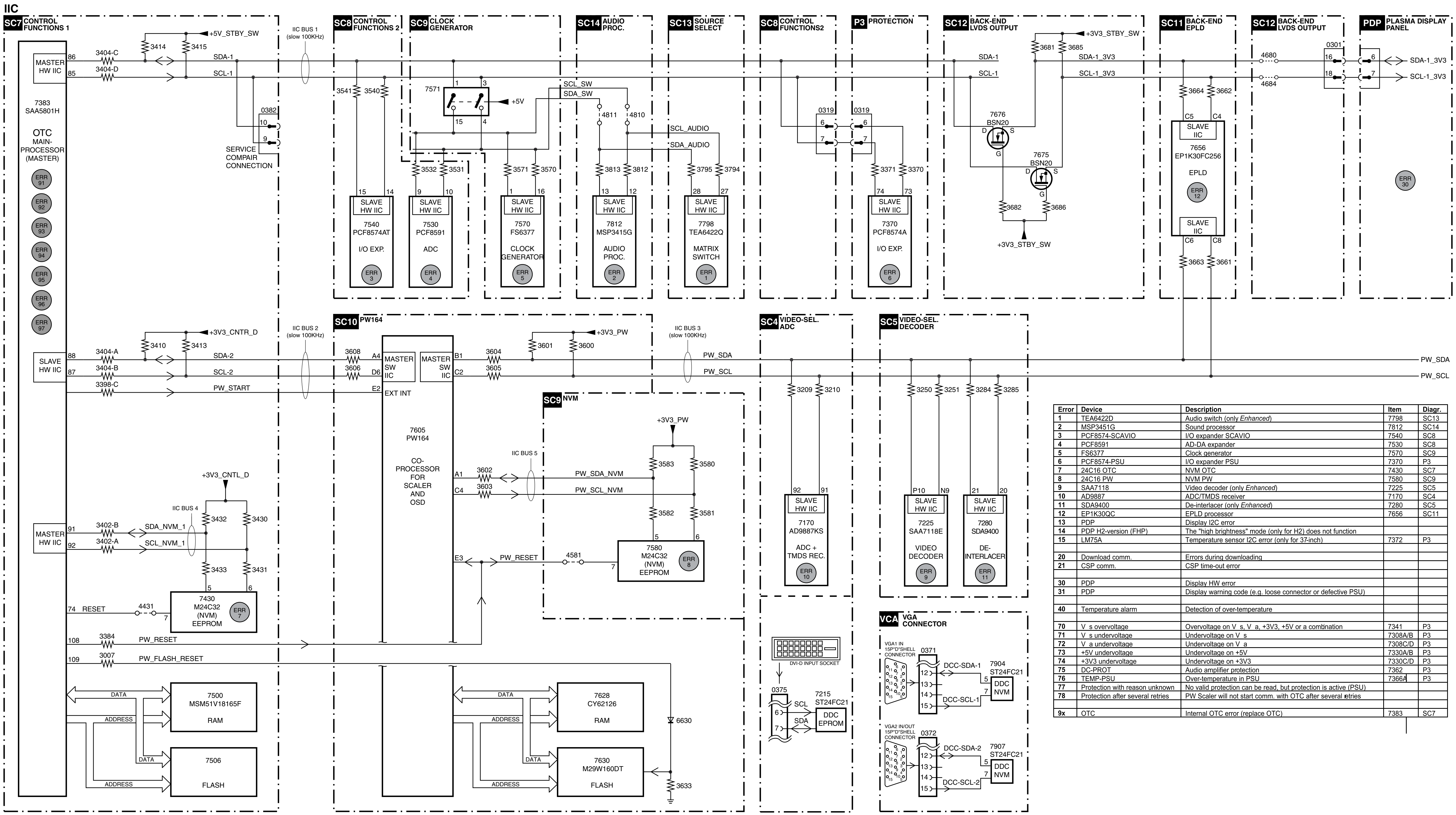
030502

# I2C-IC Overview (FM23 AC/FM24 AB/FM33 AA)


IIC
SC7 CONTROL FUNCTIONS 1
MASTER HW IIC
7383 SAA5801H
OTC MAIN-PROCESSOR (MASTER)
ERR 91
ERR 92
ERR 93
ERR 94
ERR 95
ERR 96
ERR 97
SLAVE HW IIC
MASTER HW IIC
+5V_STBY_SW
3414
3415
3404-C
3404-D
SDA-1
SCL-1
IIC BUS 1 (slow 100KHz)
0382
SERVICE COMPAIR CONNECTION
+3V3_CNTR_D
3410
3413
3404-A
3404-B
3398-C
SDA-2
SCL-2
PW_START
IIC BUS 2 (slow 100KHz)
+3V3_CNTL_D
IIC BUS 4
3402-B
3402-A
SDA_NVM_1
SCL_NVM_1
3432
3430
3433
3431
7430 M24C32 (NVM) EEPROM
ERR 7
74 RESET
4431
3384
PW_RESET
3007
PW_FLASH_RESET
DATA
ADDRESS
7500 MSM51V18165F RAM
7506 FLASH
SC8 CONTROL FUNCTIONS 2
3541
3540
7540 PCF8574AT I/O EXP.
ERR 3
7530 PCF8591 ADC
ERR 4
SC9 CLOCK GENERATOR
7571
+5V
3532
3531
3571
3570
7570 FS6377 CLOCK GENERATOR
ERR 5
SCL_SW
SDA_SW
SC14 AUDIO PROC.
4811
4810
3813
3812
7812 MSP3415G AUDIO PROC.
ERR 2
SC13 SOURCE SELECT
SCL_AUDIO
SDA_AUDIO
3795
3794
7798 TEA6422Q MATRIX SWITCH
ERR 1
SC8 CONTROL FUNCTIONS2
0319
P3 PROTECTION
3371
3370
7370 PCF8574A I/O EXP.
ERR 6
SC12 BACK-END LVDS OUTPUT
+3V3_STBY_SW
3681
3685
SDA-1_3V3
SCL-1_3V3
7676 BSN20
7675 BSN20
3682
3686
+3V3_STBY_SW
SC11 BACK-END EPLD
3664
3662
7656 EP1K30FC256 EPLD
ERR 12
3663
3661
SC12 BACK-END LVDS OUTPUT
4680
4684
0301
PDP PLASMA DISPLAY PANEL
ERR 30
SC10 PW164
3608
3606
MASTER SW IIC
MASTER SW IIC
EXT INT
7605 PW164 CO-PROCESSOR FOR SCALER AND OSD
3604
3605
+3V3_PW
3601
3600
IIC BUS 3 (slow 100KHz)
PW_SDA
PW_SCL
IIC BUS 5
3602
3603
PW_SDA_NVM
PW_SCL_NVM
PW_RESET
4581
SC9 NVM
+3V3_PW
3583
3580
3582
3581
7580 M24C32 (NVM) EEPROM
ERR 8
7628 CY62126 RAM
7630 M29W160DT FLASH
6630
3633
SC4 VIDEO-SEL. ADC
3209
3210
7170 AD9887KS ADC + TMDS REC.
ERR 10
DVI-D INPUT SOCKET
0375
SCL
SDA
7215 ST24FC21 DDC EPROM
SC5 VIDEO-SEL. DECODER
3250
3251
3284
3285
7225 SAA7118E VIDEO DECODER
ERR 9
7280 SDA9400 DE-INTERLACER
ERR 11
VCA VGA CONNECTOR
VGA1 IN 15P"D"SHELL CONNECTOR
0371
DCC-SDA-1
DCC-SCL-1
7904 ST24FC21 DDC NVM
VGA2 IN/OUT 15P"D"SHELL CONNECTOR
0372
DCC-SDA-2
DCC-SCL-2
7907 ST24FC21 DDC NVM

| Error | Device | Description | Item | Diagr. |
|---|---|---|---|---|
| 1 | TEA6422D | Audio switch (only *Enhanced*) | 7798 | SC13 |
| 2 | MSP3451G | Sound processor | 7812 | SC14 |
| 3 | PCF8574-SCAVIO | I/O expander SCAVIO | 7540 | SC8 |
| 4 | PCF8591 | AD-DA expander | 7530 | SC8 |
| 5 | FS6377 | Clock generator | 7570 | SC9 |
| 6 | PCF8574-PSU | I/O expander PSU | 7370 | P3 |
| 7 | 24C16 OTC | NVM OTC | 7430 | SC7 |
| 8 | 24C16 PW | NVM PW | 7580 | SC9 |
| 9 | SAA7118 | Video decoder (only *Enhanced*) | 7225 | SC5 |
| 10 | AD9887 | ADC/TMDS receiver | 7170 | SC4 |
| 11 | SDA9400 | De-interlacer (only *Enhanced*) | 7280 | SC5 |
| 12 | EP1K30QC | EPLD processor | 7656 | SC11 |
| 13 | PDP | Display I2C error | | |
| 14 | PDP H2-version (FHP) | The "high brightness" mode (only for H2) does not function | | |
| 15 | LM75A | Temperature sensor I2C error (only for 37-inch) | 7372 | P3 |
| | | | | |
| 20 | Download comm. | Errors during downloading | | |
| 21 | CSP comm. | CSP time-out error | | |
| | | | | |
| 30 | PDP | Display HW error | | |
| 31 | PDP | Display warning code (e.g. loose connector or defective PSU) | | |
| | | | | |
| 40 | Temperature alarm | Detection of over-temperature | | |
| | | | | |
| 70 | V s overvoltage | Overvoltage on V s, V a, +3V3, +5V or a combination | 7341 | P3 |
| 71 | V s undervoltage | Undervoltage on V s | 7308A/B | P3 |
| 72 | V a undervoltage | Undervoltage on V a | 7308C/D | P3 |
| 73 | +5V undervoltage | Undervoltage on +5V | 7330A/B | P3 |
| 74 | +3V3 undervoltage | Undervoltage on +3V3 | 7330C/D | P3 |
| 75 | DC-PROT | Audio amplifier protection | 7362 | P3 |
| 76 | TEMP-PSU | Over-temperature in PSU | 7366A | P3 |
| 77 | Protection with reason unknown | No valid protection can be read, but protection is active (PSU) | | |
| 78 | Protection after several retries | PW Scaler will not start comm. with OTC after several retries | | |
| | | | | |
| 9x | OTC | Internal OTC error (replace OTC) | 7383 | SC7 |

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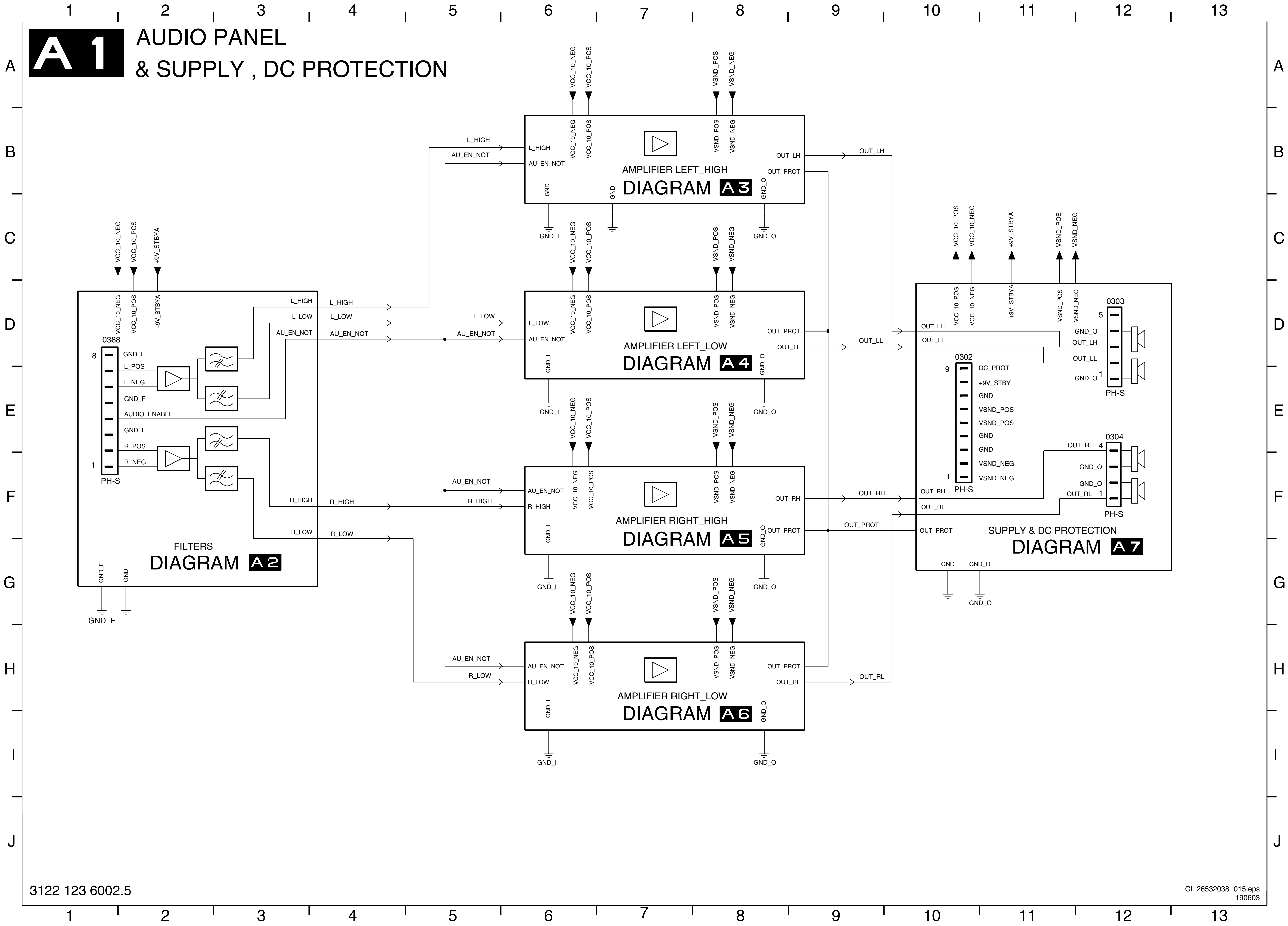
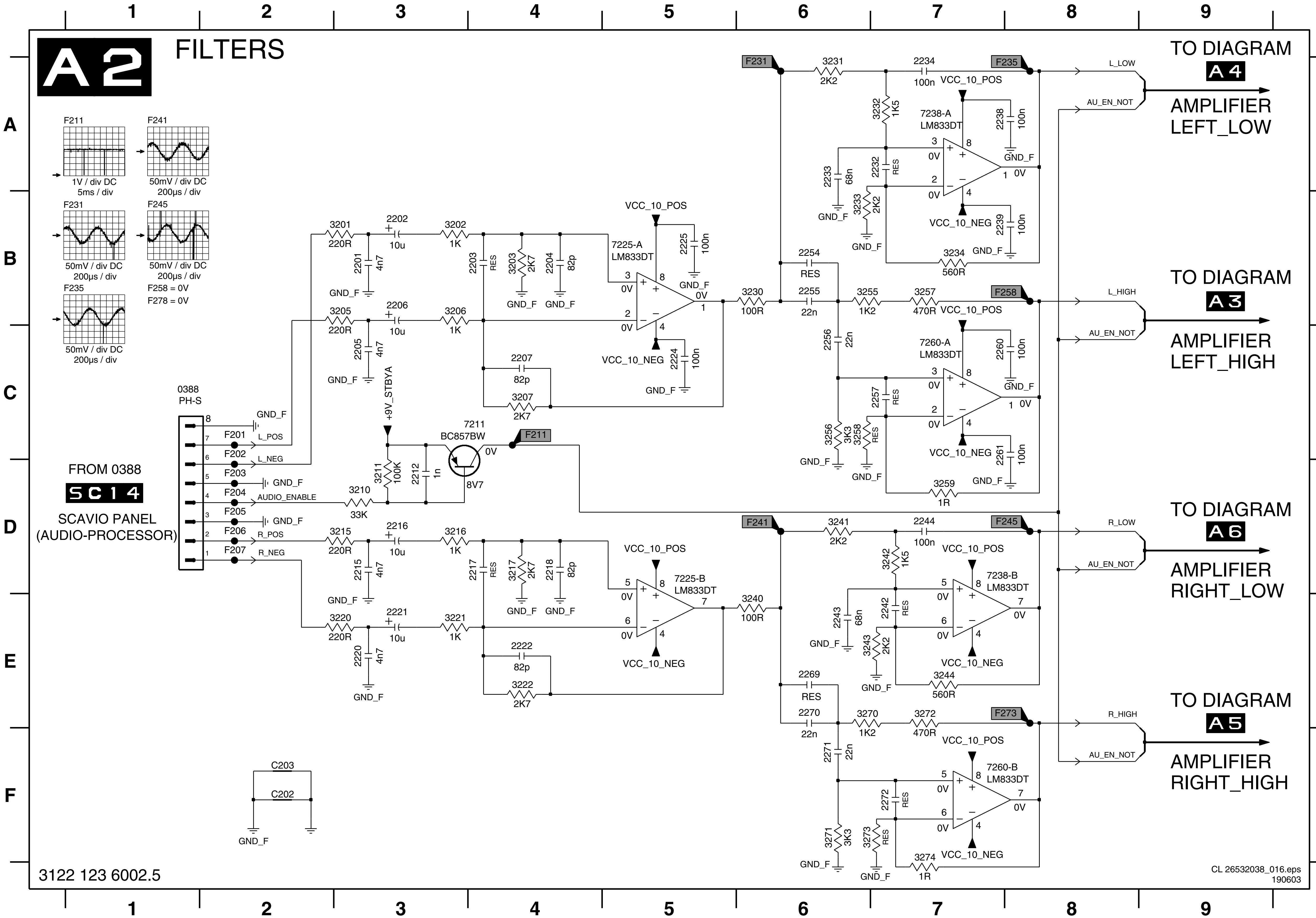
040703

# 7. Circuit Diagrams and PWB Layouts

## Audio Panel & Supply: DC Protection


A 1
AUDIO PANEL
& SUPPLY , DC PROTECTION
1 2 3 4 5 6 7 8 9 10 11 12 13
A B C D E F G H I J
VCC_10_NEG
VCC_10_POS
+9V_STBYA
0388
8
GND_F
L_POS
L_NEG
GND_F
AUDIO_ENABLE
GND_F
R_POS
R_NEG
1
PH-S
L_HIGH
L_LOW
AU_EN_NOT
R_HIGH
R_LOW
FILTERS
DIAGRAM A2
GND_F
GND
VSND_POS
VSND_NEG
AMPLIFIER LEFT_HIGH
DIAGRAM A3
OUT_LH
OUT_PROT
GND_I
GND
GND_O
AMPLIFIER LEFT_LOW
DIAGRAM A4
OUT_LL
AMPLIFIER RIGHT_HIGH
DIAGRAM A5
OUT_RH
AMPLIFIER RIGHT_LOW
DIAGRAM A6
OUT_RL
0302
9
DC_PROT
+9V_STBY
GND
VSND_POS
VSND_POS
GND
GND
VSND_NEG
VSND_NEG
1
PH-S
0303
5
GND_O
OUT_LH
OUT_LL
GND_O 1
0304
OUT_RH 4
GND_O
GND_O
OUT_RL 1
PH-S
SUPPLY & DC PROTECTION
DIAGRAM A7
GND
GND_O
3122 123 6002.5
CL 26532038_015.eps
190603

## Audio Panel & Supply: Filters

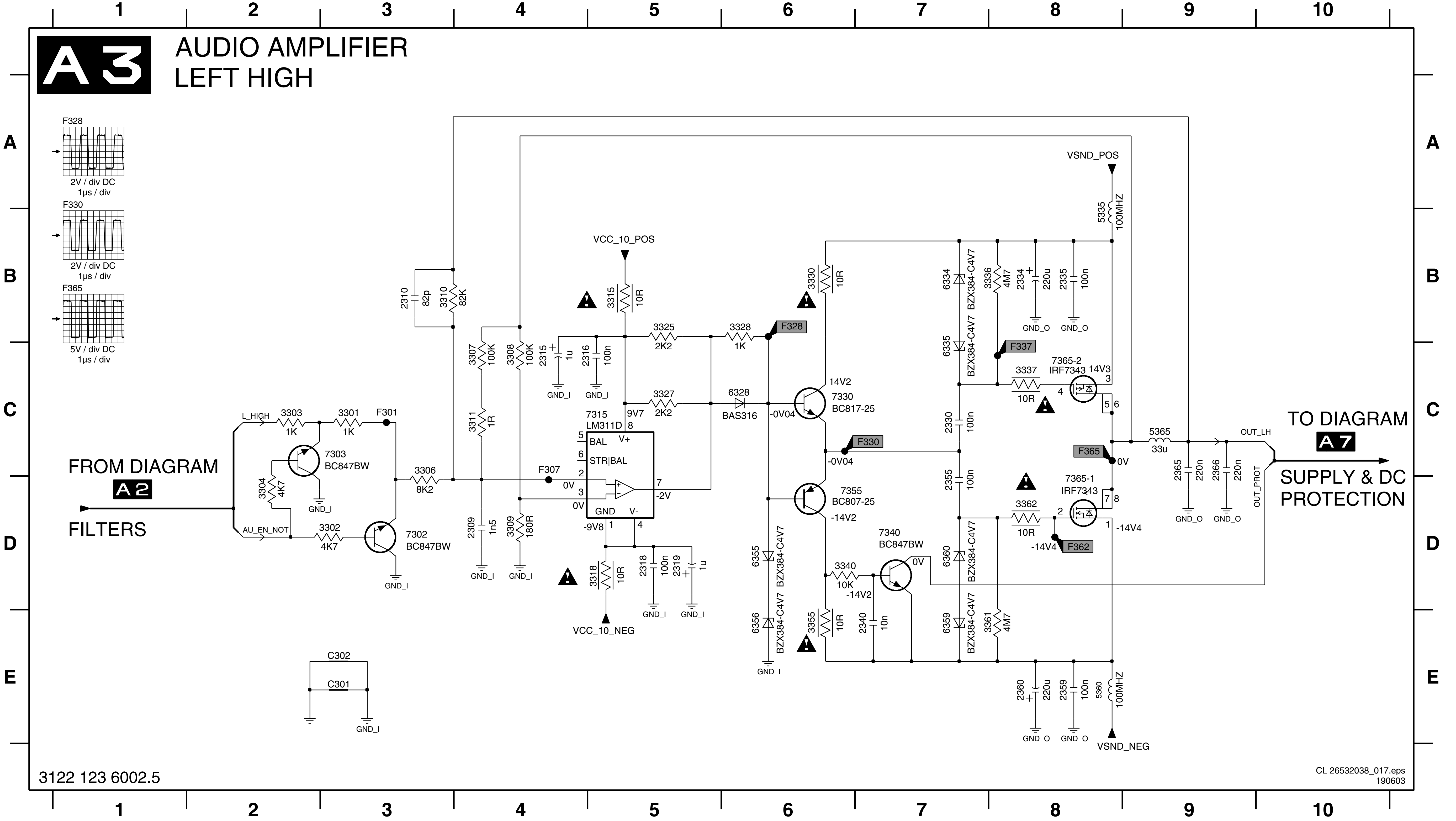

A2
FILTERS
F211
F241
1V / div DC
5ms / div
50mV / div DC
200µs / div
F231
F245
F235
F258 = 0V
F278 = 0V
FROM 0388
SC14
SCAVIO PANEL
(AUDIO-PROCESSOR)
0388
PH-S
L_POS
L_NEG
R_POS
R_NEG
AUDIO_ENABLE
GND_F
+9V_STBYA
7211
BC857BW
8V7
7225-A
LM833DT
7225-B
LM833DT
7238-A
LM833DT
7238-B
LM833DT
7260-A
LM833DT
7260-B
LM833DT
VCC_10_POS
VCC_10_NEG
RES
C202
C203
L_LOW
L_HIGH
R_LOW
R_HIGH
AU_EN_NOT
TO DIAGRAM
A4
AMPLIFIER
LEFT_LOW
TO DIAGRAM
A3
AMPLIFIER
LEFT_HIGH
TO DIAGRAM
A6
AMPLIFIER
RIGHT_LOW
TO DIAGRAM
A5
AMPLIFIER
RIGHT_HIGH
3122 123 6002.5
CL 26532038_016.eps
190603

| | |
|---|---|
| 0388 | C1 |
| 2201 | B3 |
| 2202 | B3 |
| 2203 | B4 |
| 2204 | B4 |
| 2205 | C3 |
| 2206 | B3 |
| 2207 | C4 |
| 2212 | D3 |
| 2215 | D3 |
| 2216 | D3 |
| 2217 | D4 |
| 2218 | D4 |
| 2220 | E3 |
| 2221 | E3 |
| 2222 | E4 |
| 2224 | C5 |
| 2225 | B5 |
| 2232 | A7 |
| 2233 | A6 |
| 2234 | A7 |
| 2238 | A7 |
| 2239 | B7 |
| 2242 | E7 |
| 2243 | E6 |
| 2244 | D7 |
| 2254 | B6 |
| 2255 | B6 |
| 2256 | C6 |
| 2257 | C7 |
| 2260 | C7 |
| 2261 | C7 |
| 2269 | E6 |
| 2270 | E6 |
| 2271 | F6 |
| 2272 | F7 |
| 3201 | B3 |
| 3202 | B3 |
| 3203 | B4 |
| 3205 | B3 |
| 3206 | B3 |
| 3207 | C4 |
| 3210 | D3 |
| 3211 | D3 |
| 3215 | D3 |
| 3216 | D3 |
| 3217 | D4 |
| 3220 | E3 |
| 3221 | E3 |
| 3222 | E4 |
| 3230 | B6 |
| 3231 | A6 |
| 3232 | A7 |
| 3233 | B6 |
| 3234 | B7 |
| 3240 | E6 |
| 3241 | D6 |
| 3242 | D7 |
| 3243 | E6 |
| 3244 | E7 |
| 3255 | B6 |
| 3256 | C6 |
| 3257 | B7 |
| 3258 | C6 |
| 3259 | D7 |
| 3270 | E6 |
| 3271 | F6 |
| 3272 | E7 |
| 3273 | F6 |
| 3274 | F7 |
| 7211 | C4 |
| 7225-A | B5 |
| 7225-B | D5 |
| 7238-A | A7 |
| 7238-B | D7 |
| 7260-A | C7 |
| 7260-B | F7 |
| C202 | F2 |
| C203 | F2 |
| F201 | C2 |
| F202 | C2 |
| F203 | D2 |
| F204 | D2 |
| F205 | D2 |
| F206 | D2 |
| F207 | D2 |
| F211 | C4 |
| F231 | A6 |
| F235 | A8 |
| F241 | D6 |
| F245 | D8 |
| F258 | B8 |
| F273 | E8 |

## Audio Panel & Supply: Left High

| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2309 D4 | 2316 C5 | 2330 C7 | 2340 E7 | 2360 E8 | 3301 C3 | 3304 D2 | 3308 C4 | 3311 C4 | 3325 B5 | 3330 B6 | 3340 D6 | 3362 D8 | 5365 C9 | 6335 C7 | 6359 E7 | 7303 C3 | 7340 D7 | 7365-2 C8 | F301 C3 | F330 C7 | F365 C8 |
| 2310 B3 | 2318 D5 | 2334 B8 | 2355 D7 | 2365 C9 | 3302 D3 | 3306 C3 | 3309 D4 | 3315 B5 | 3327 C5 | 3336 B8 | 3355 E6 | 5335 B8 | 6328 C6 | 6355 D6 | 6360 D7 | 7315 C4 | 7355 D6 | C301 E3 | F307 C4 | F337 C8 | |
| 2315 C4 | 2319 D5 | 2335 B8 | 2359 E8 | 2366 C9 | 3303 C2 | 3307 C4 | 3310 B3 | 3318 D5 | 3328 B6 | 3337 C8 | 3361 E8 | 5360 E8 | 6334 B7 | 6356 E6 | 7302 D3 | 7330 C6 | 7365-1 D8 | C302 E3 | F328 B6 | F362 D8 | |

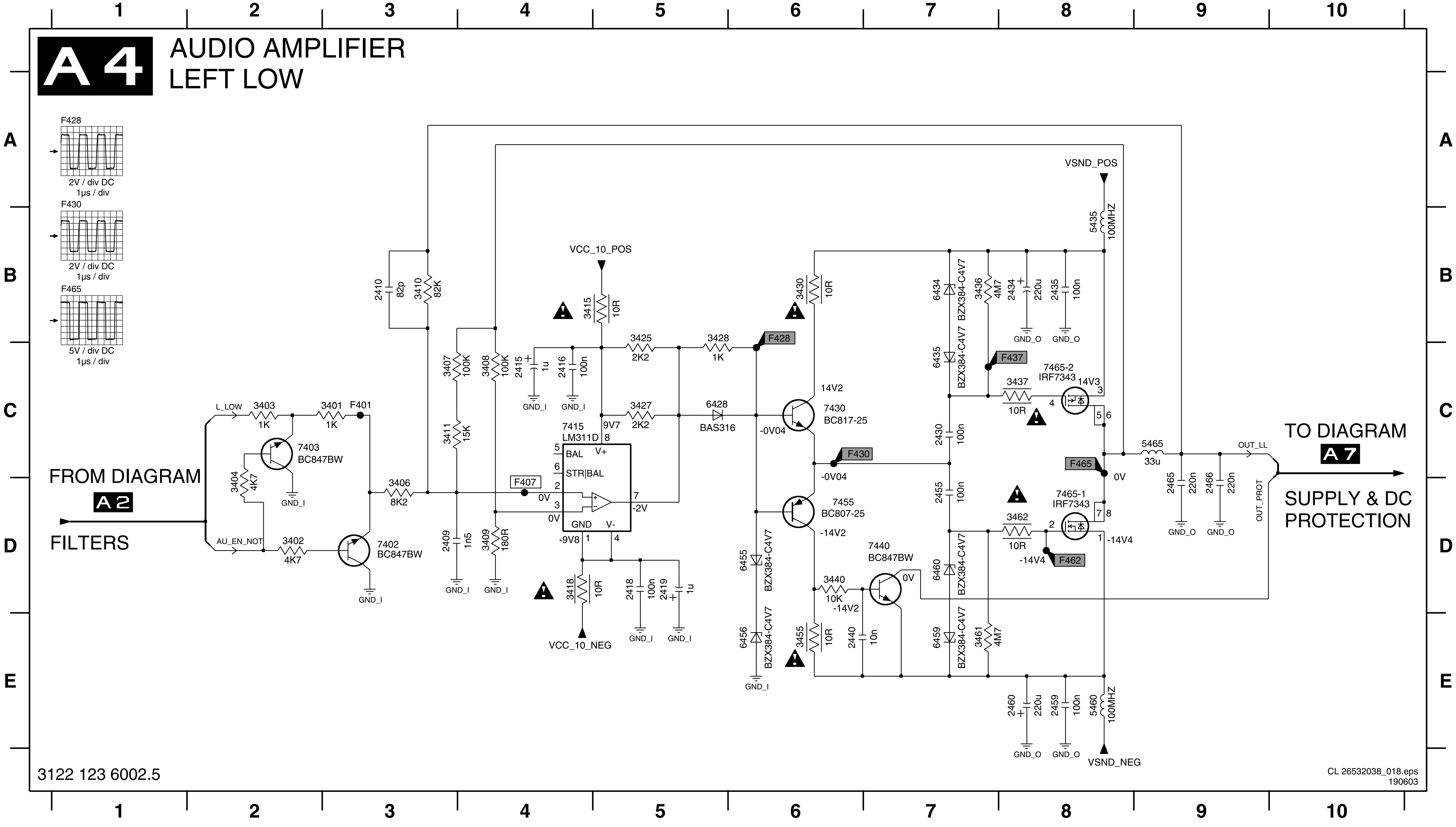
# A3 AUDIO AMPLIFIER LEFT HIGH



1 2 3 4 5 6 7 8 9 10
A B C D E
F328
2V / div DC
1µs / div
F330
2V / div DC
1µs / div
F365
5V / div DC
1µs / div
FROM DIAGRAM A2
FILTERS
L_HIGH
AU_EN_NOT
3303 1K
3301 1K
F301
7303 BC847BW
3304 4K7
GND_I
3302 4K7
7302 BC847BW
3306 8K2
2310 82p
3310 82K
3307 100K
3308 100K
3311 1R
2309 1n5
3309 180R
F307
7315 LM311D
BAL
STR|BAL
V+
GND
V-
0V
-2V
9V7
-9V8
VCC_10_POS
VCC_10_NEG
3315 10R
2315 1u
2316 100n
3318 10R
2318 100n
2319 1u
3325 2K2
3327 2K2
3328 1K
F328
6328 BAS316
6355 BZX384-C4V7
6356 BZX384-C4V7
3330 10R
7330 BC817-25
14V2
-0V04
F330
7355 BC807-25
-14V2
3340 10K
7340 BC847BW
0V
2340 10n
3355 10R
6334 BZX384-C4V7
6335 BZX384-C4V7
3336 4M7
2334 220u
2335 100n
GND_O
F337
3337 10R
7365-2 IRF7343
14V3
2330 100n
2355 100n
F365
7365-1 IRF7343
3362 10R
-14V4
F362
6360 BZX384-C4V7
6359 BZX384-C4V7
3361 4M7
2360 220u
2359 100n
5360 100MHZ
VSND_NEG
VSND_POS
5335 100MHZ
5365 33u
OUT_LH
2365 220n
2366 220n
OUT_PROT
TO DIAGRAM A7
SUPPLY & DC PROTECTION
C302
C301
3122 123 6002.5
CL 26532038_017.eps
190603

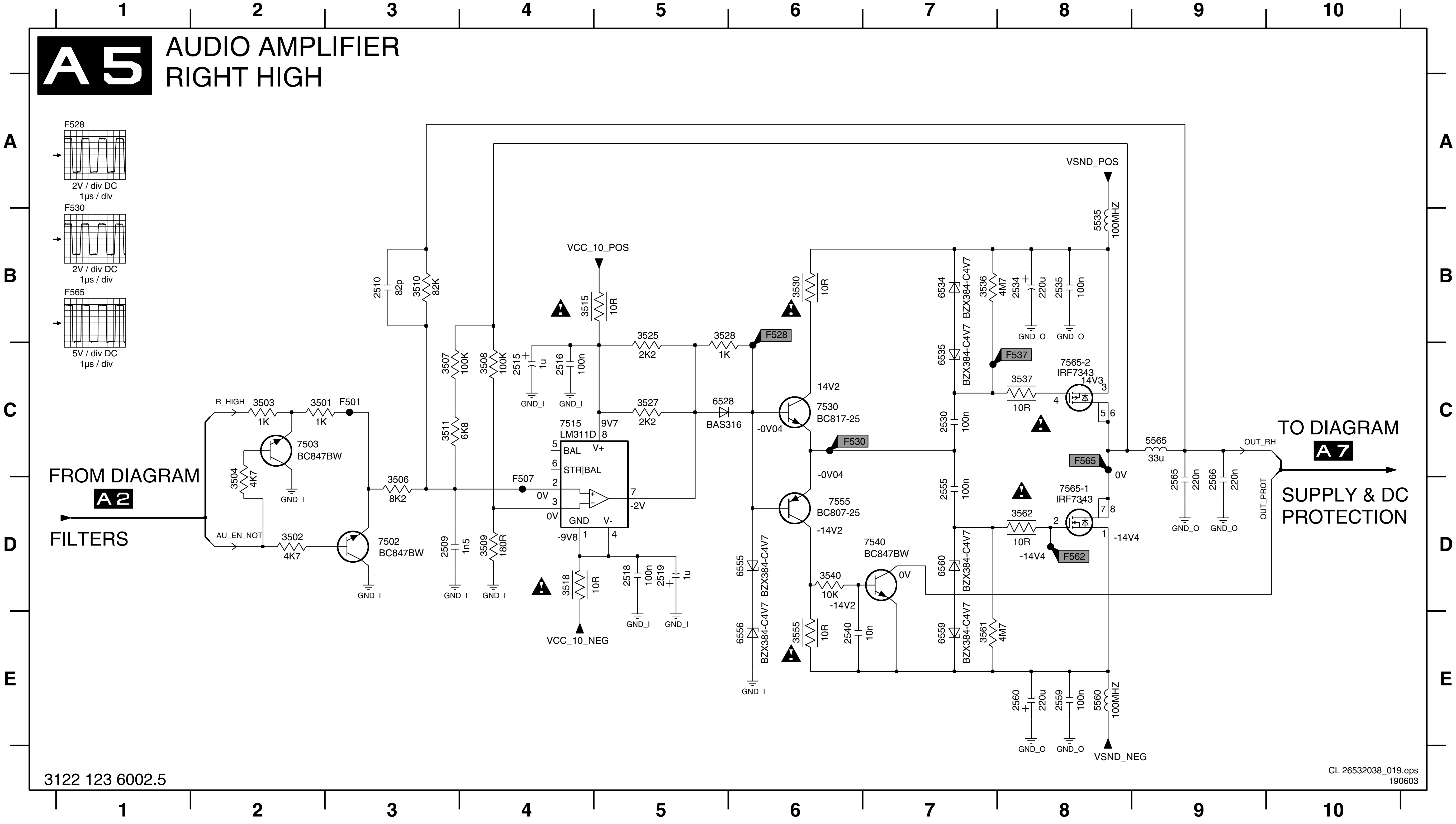
## Audio Panel & Supply: Left Low

2409 D3
2410 B3
2415 C4
2416 C4
2418 D5
2419 D5
2430 C7
2434 B8
2435 B8
2440 E6
2455 D7
2459 E8
2460 E8
2465 D9
2466 D9
3401 C3
3402 D2
3403 C2
3404 D2
3406 C3
3407 C3
3408 C4
3409 D4
3410 B3
3411 C3
3415 B4
3418 D4
3425 B5
3427 C5
3428 B5
3430 B6
3436 B7
3437 C8
3440 D6
3455 E6
3461 E7
3462 D8
5435 B8
5460 E8
5465 C9
6428 C5
6434 B7
6435 C7
6455 D6
6456 E6
6459 E7
6460 D7
7402 D3
7403 C2
7415 C4
7430 C6
7440 D7
7455 D6
7465-1 D8
7465-2 C8
F401 C3
F407 D4
F428 B6
F430 C6
F437 C8
F462 D8
F465 C8


1 2 3 4 5 6 7 8 9 10
A B C D E
A 4
AUDIO AMPLIFIER
LEFT LOW
F428
2V / div DC
1µs / div
F430
2V / div DC
1µs / div
F465
5V / div DC
1µs / div
FROM DIAGRAM
A 2
FILTERS
L_LOW
AU_EN_NOT
3403 1K
3401 1K
F401
7403 BC847BW
3404 4K7
GND_I
3402 4K7
7402 BC847BW
3406 8K2
2410 82p
3410 82K
3407 100K
3408 100K
3411 15K
2409 1n5
3409 180R
VCC_10_POS
3415 10R
2415 1u
2416 100n
3425 2K2
3428 1K
F428
3427 2K2
6428 BAS316
9V7
7415 LM311D
BAL
STR|BAL
V+
GND
V-
F407
0V
-2V
-9V8
3418 10R
VCC_10_NEG
2418 100n
2419 1u
3430 10R
14V2
7430 BC817-25
-0V04
F430
-0V04
7455 BC807-25
-14V2
6455 BZX384-C4V7
6456 BZX384-C4V7
3440 10K
-14V2
7440 BC847BW
0V
3455 10R
2440 10n
VSND_POS
5435 100MHZ
6434 BZX384-C4V7
6435 BZX384-C4V7
3436 4M7
2434 220u
2435 100n
GND_O
F437
7465-2 IRF7343
14V3
3437 10R
2430 100n
2455 100n
F465
0V
3462 10R
7465-1 IRF7343
-14V4
F462
6460 BZX384-C4V7
6459 BZX384-C4V7
3461 4M7
2460 220u
2459 100n
5460 100MHZ
VSND_NEG
5465 33u
OUT_LL
2465 220n
2466 220n
OUT_PROT
TO DIAGRAM
A 7
SUPPLY & DC
PROTECTION
3122 123 6002.5
CL 26532038_018.eps
190603

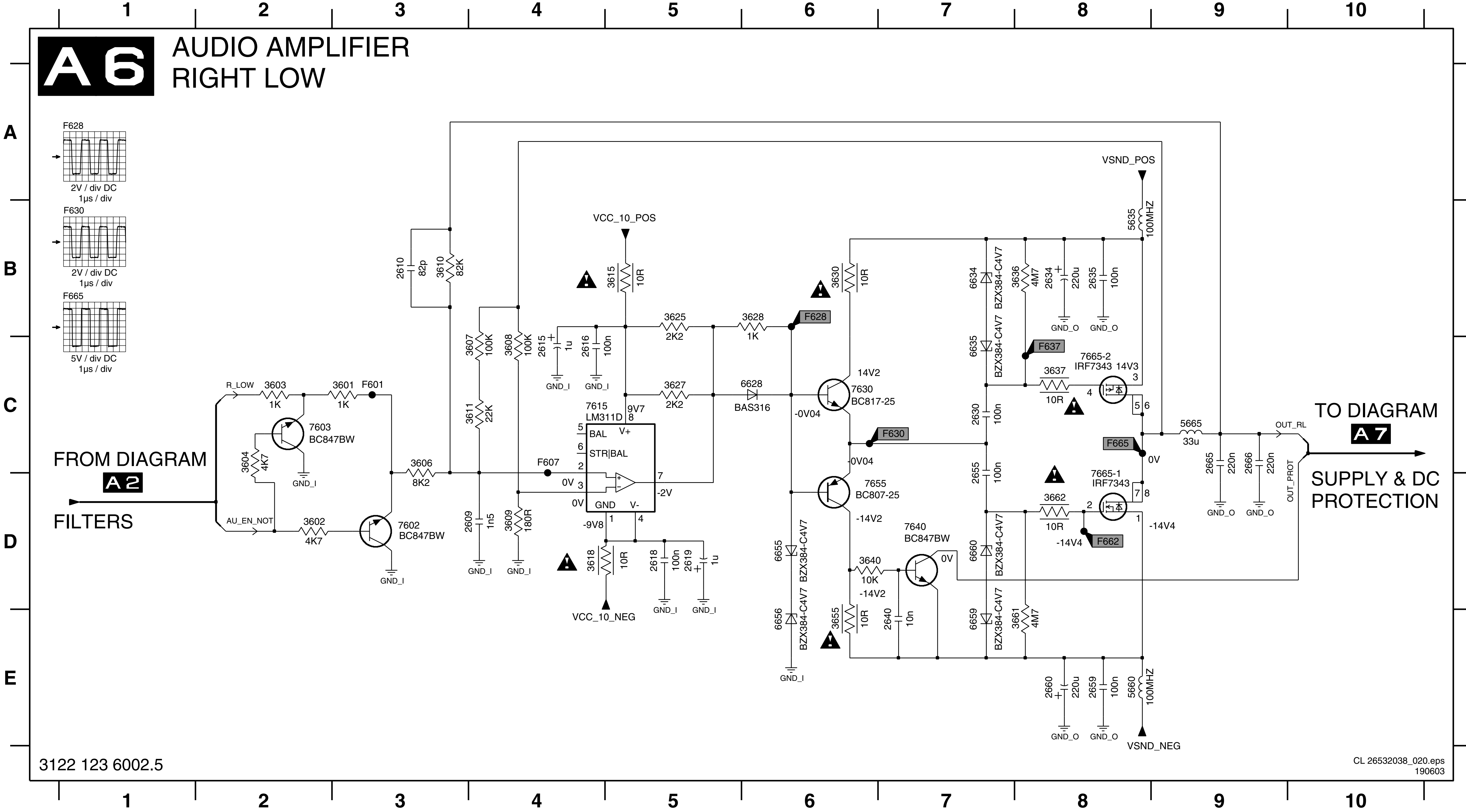
## Audio Panel & Supply: Right High

| Part | Location |
|---|---|
| 2509 | D3 |
| 2510 | B3 |
| 2515 | C4 |
| 2516 | C4 |
| 2518 | D5 |
| 2519 | D5 |
| 2530 | C7 |
| 2534 | B8 |
| 2535 | B8 |
| 2540 | E6 |
| 2555 | D7 |
| 2559 | E8 |
| 2560 | E8 |
| 2565 | D9 |
| 2566 | D9 |
| 3501 | C2 |
| 3502 | D2 |
| 3503 | C2 |
| 3504 | D2 |
| 3506 | D3 |
| 3507 | C3 |
| 3508 | C4 |
| 3509 | D4 |
| 3510 | B3 |
| 3511 | C3 |
| 3515 | B4 |
| 3518 | D4 |
| 3525 | B5 |
| 3527 | C5 |
| 3528 | B5 |
| 3530 | B6 |
| 3536 | B7 |
| 3537 | C8 |
| 3540 | D6 |
| 3555 | E6 |
| 3561 | E7 |
| 3562 | D8 |
| 5535 | B8 |
| 5560 | E8 |
| 5565 | C9 |
| 6528 | C5 |
| 6534 | B7 |
| 6535 | C7 |
| 6555 | D6 |
| 6556 | E6 |
| 6559 | E7 |
| 6560 | D7 |
| 7502 | D3 |
| 7503 | C2 |
| 7515 | C4 |
| 7530 | C6 |
| 7540 | D7 |
| 7555 | D6 |
| 7565-1 | D8 |
| 7565-2 | C8 |
| F501 | C3 |
| F507 | D4 |
| F528 | B6 |
| F530 | C6 |
| F537 | C8 |
| F562 | D8 |
| F565 | C8 |

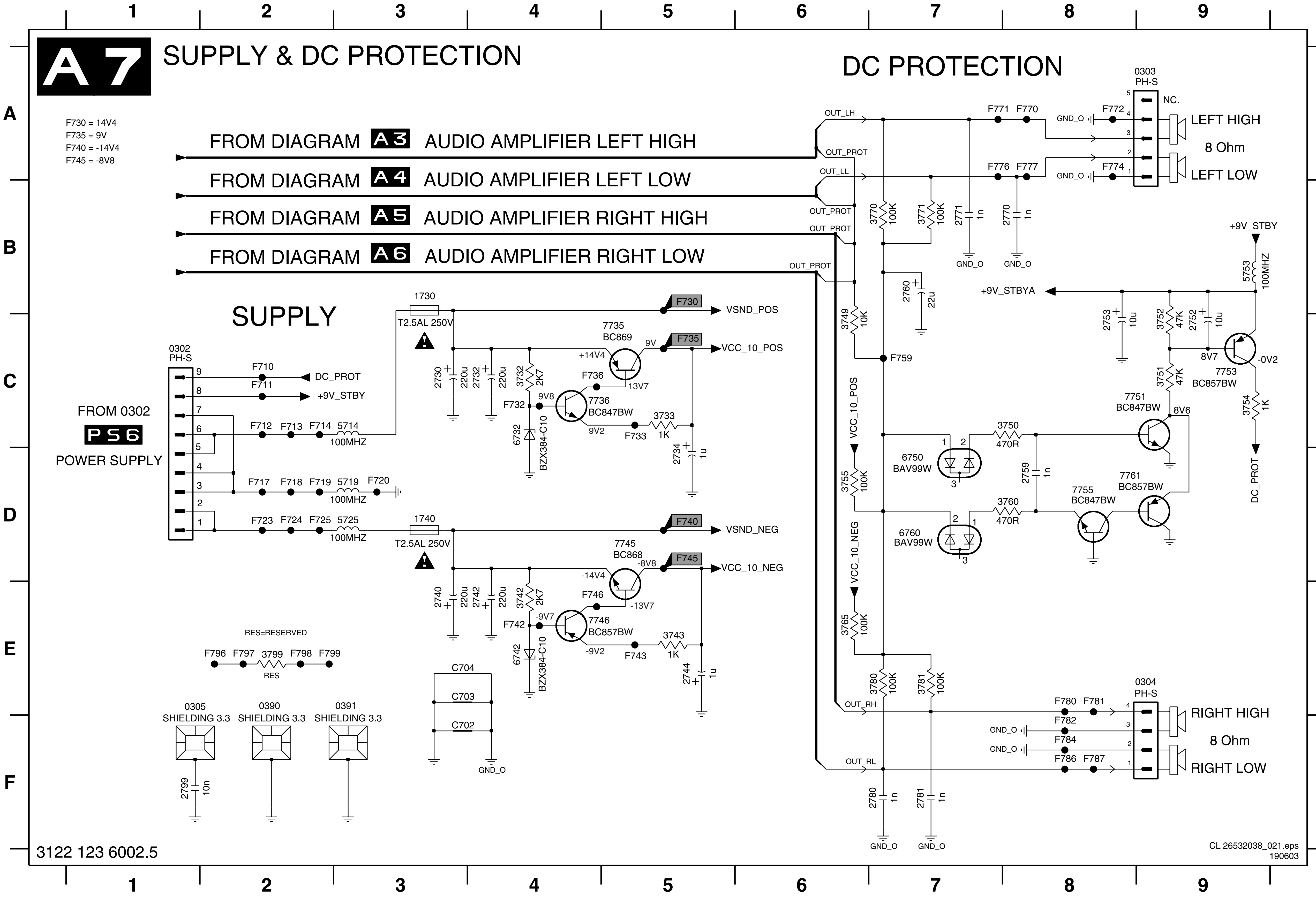

1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
A5
AUDIO AMPLIFIER
RIGHT HIGH
F528
2V / div DC
1µs / div
F530
2V / div DC
1µs / div
F565
5V / div DC
1µs / div
FROM DIAGRAM
A2
FILTERS
R_HIGH
AU_EN_NOT
3503
1K
3501
1K
F501
7503
BC847BW
3504
4K7
3502
4K7
7502
BC847BW
GND_I
2510
82p
3510
82K
3506
8K2
3507
100K
3511
6K8
3508
100K
2509
1n5
3509
180R
VCC_10_POS
3515
10R
2515
1u
2516
100n
F507
0V
7515
LM311D
9V7
8
5
BAL
V+
6
STR|BAL
2
3
7
-2V
GND
V-
-9V8
1
4
3518
10R
VCC_10_NEG
2518
100n
2519
1u
3525
2K2
3527
2K2
3528
1K
F528
6528
BAS316
-0V04
3530
10R
14V2
7530
BC817-25
F530
-0V04
7555
BC807-25
-14V2
6555
BZX384-C4V7
6556
BZX384-C4V7
7540
BC847BW
3540
10K
-14V2
0V
3555
10R
2540
10n
6534
BZX384-C4V7
6535
BZX384-C4V7
3536
4M7
2534
220u
2535
100n
GND_O
F537
7565-2
IRF7343
14V3
3537
10R
4
3
5
6
2530
100n
2555
100n
F565
0V
7565-1
IRF7343
3562
10R
-14V4
F562
2
7
8
1
-14V4
6560
BZX384-C4V7
6559
BZX384-C4V7
3561
4M7
2560
220u
2559
100n
5560
100MHZ
VSND_NEG
VSND_POS
5535
100MHZ
5565
33u
2565
220n
2566
220n
OUT_RH
OUT_PROT
TO DIAGRAM
A7
SUPPLY & DC
PROTECTION
3122 123 6002.5
CL 26532038_019.eps
190603

## Audio Panel & Supply: Right Low

**2609 D4**
**2610 B3**
**2615 C4**
**2616 C4**
**2618 D5**
**2619 D5**
**2630 C7**
**2634 B8**
**2635 B8**
**2640 E7**
**2655 C7**
**2659 E8**
**2660 E8**
**2665 C9**
**2666 C9**
**3601 C3**
**3602 D2**
**3603 C2**
**3604 C2**
**3606 C3**
**3607 C4**
**3608 C4**
**3609 D4**
**3610 B3**
**3611 C4**
**3615 B5**
**3618 D4**
**3625 B5**
**3627 C5**
**3628 B6**
**3630 B6**
**3636 B8**
**3637 C8**
**3640 D6**
**3655 E6**
**3661 E8**
**3662 D8**
**5635 B8**
**5660 E8**
**5665 C9**
**6628 C6**
**6634 B7**
**6635 C7**
**6655 D6**
**6656 E6**
**6659 E7**
**6660 D7**
**7602 D3**
**7603 C2**
**7615 C4**
**7630 C6**
**7640 D7**
**7655 D6**
**7665-1 D8**
**7665-2 C8**
**F601 C3**
**F607 C4**
**F628 B6**
**F630 C7**
**F637 C8**
**F662 D8**
**F665 C8**


A6
AUDIO AMPLIFIER
RIGHT LOW
1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F628
2V / div DC
1µs / div
F630
2V / div DC
1µs / div
F665
5V / div DC
1µs / div
FROM DIAGRAM
A2
FILTERS
R_LOW
AU_EN_NOT
3603
1K
3601
1K
F601
7603
BC847BW
3604
4K7
GND_I
3602
4K7
7602
BC847BW
GND_I
2610
82p
3610
82K
3606
8K2
3607
100K
3608
100K
3611
22K
2609
1n5
3609
180R
GND_I
GND_I
F607
0V
0V
VCC_10_POS
3615
10R
2615
1u
2616
100n
GND_I
GND_I
7615
LM311D
9V7
8
5
BAL
V+
6
STR|BAL
2
3
7
-2V
GND
V-
1
4
-9V8
3618
10R
VCC_10_NEG
2618
100n
2619
1u
GND_I
GND_I
3625
2K2
3627
2K2
3628
1K
6628
BAS316
F628
-0V04
3630
10R
14V2
7630
BC817-25
F630
-0V04
7655
BC807-25
-14V2
6655
BZX384-C4V7
6656
BZX384-C4V7
GND_I
3640
10K
-14V2
7640
BC847BW
0V
3655
10R
2640
10n
6634
BZX384-C4V7
6635
BZX384-C4V7
2630
100n
2655
100n
6660
BZX384-C4V7
6659
BZX384-C4V7
3636
4M7
2634
220u
2635
100n
GND_O
GND_O
F637
3637
10R
7665-2
IRF7343
14V3
3
4
5
6
F665
0V
7665-1
IRF7343
7
8
3662
10R
2
1
-14V4
-14V4
F662
3661
4M7
2660
220u
2659
100n
GND_O
GND_O
VSND_POS
5635
100MHZ
5660
100MHZ
VSND_NEG
5665
33u
2665
220n
2666
220n
GND_O
GND_O
OUT_RL
OUT_PROT
TO DIAGRAM
A7
SUPPLY & DC
PROTECTION
3122 123 6002.5
CL 26532038_020.eps
190603

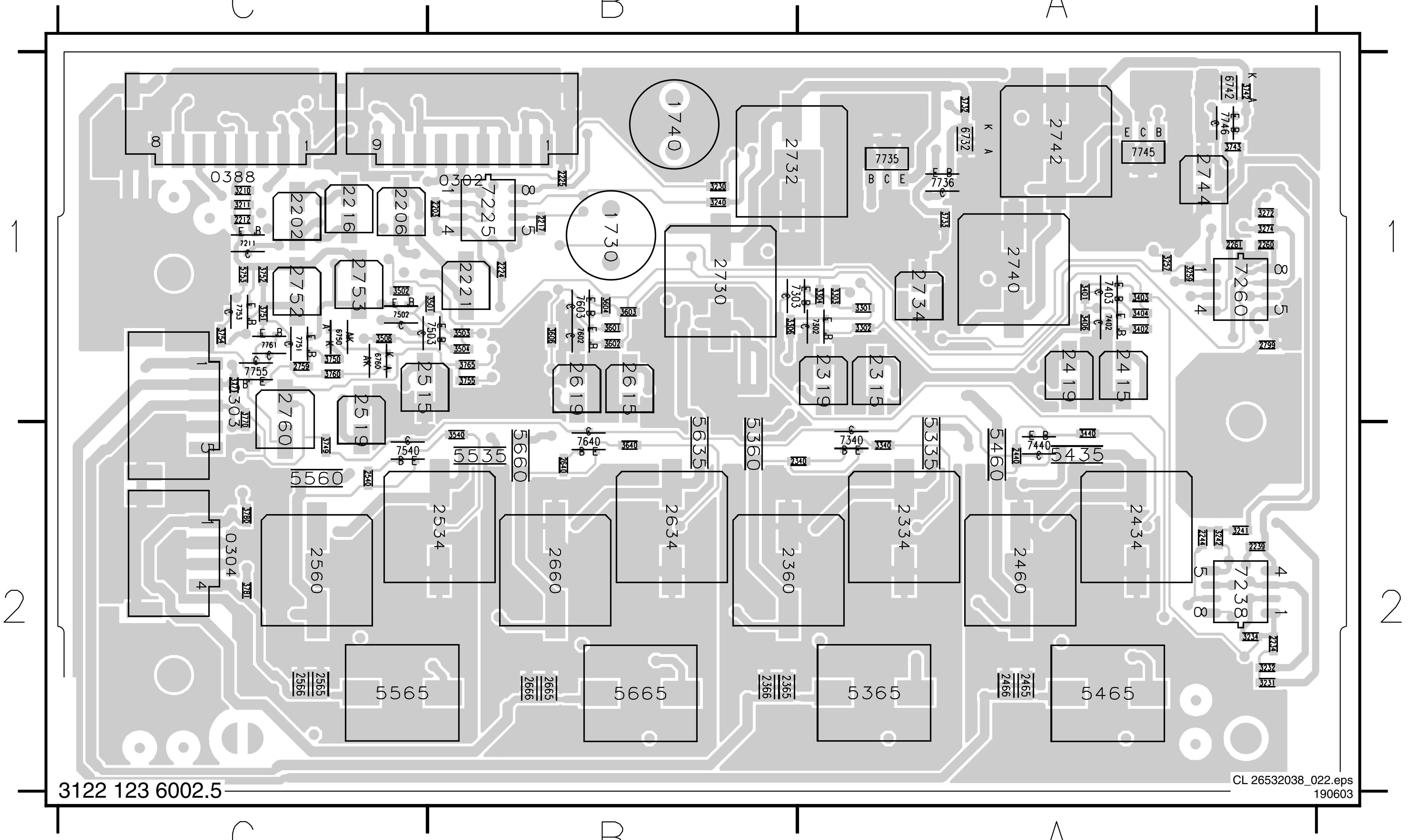
## Audio Panel & Supply: Supply and DC Protection


A7 SUPPLY & DC PROTECTION
F730 = 14V4
F735 = 9V
F740 = -14V4
F745 = -8V8
FROM DIAGRAM A3 AUDIO AMPLIFIER LEFT HIGH
FROM DIAGRAM A4 AUDIO AMPLIFIER LEFT LOW
FROM DIAGRAM A5 AUDIO AMPLIFIER RIGHT HIGH
FROM DIAGRAM A6 AUDIO AMPLIFIER RIGHT LOW
SUPPLY
DC PROTECTION
FROM 0302
PS6
POWER SUPPLY
0302 PH-S
DC_PROT
+9V_STBY
1730 T2.5AL 250V
1740 T2.5AL 250V
VSND_POS
VCC_10_POS
VSND_NEG
VCC_10_NEG
7735 BC869
7736 BC847BW
7745 BC868
7746 BC857BW
BZX384-C10
5714 100MHZ
5719 100MHZ
5725 100MHZ
RES=RESERVED
0305 SHIELDING 3.3
0390 SHIELDING 3.3
0391 SHIELDING 3.3
GND_O
0303 PH-S
NC.
LEFT HIGH
8 Ohm
LEFT LOW
0304 PH-S
RIGHT HIGH
8 Ohm
RIGHT LOW
OUT_LH
OUT_PROT
OUT_LL
OUT_RH
OUT_RL
+9V_STBYA
6750 BAV99W
6760 BAV99W
7751 BC847BW
7753 BC857BW
7755 BC847BW
7761 BC857BW
5753 100MHZ
F759
3122 123 6002.5
CL 26532038_021.eps
190603

| | |
|---|---|
| 0302 | C1 |
| 0303 | A8 |
| 0304 | E8 |
| 0305 | E1 |
| 0390 | E2 |
| 0391 | E3 |
| 1730 | B3 |
| 1740 | D3 |
| 2730 | C3 |
| 2732 | C4 |
| 2734 | D5 |
| 2740 | E3 |
| 2742 | E4 |
| 2744 | E5 |
| 2752 | C9 |
| 2753 | C8 |
| 2759 | D8 |
| 2760 | B7 |
| 2770 | B8 |
| 2771 | B7 |
| 2780 | F7 |
| 2781 | F7 |
| 2799 | F1 |
| 3732 | C4 |
| 3733 | C5 |
| 3742 | E4 |
| 3743 | E5 |
| 3749 | C6 |
| 3750 | C8 |
| 3751 | C9 |
| 3752 | C9 |
| 3754 | C9 |
| 3755 | D6 |
| 3760 | D8 |
| 3765 | E6 |
| 3770 | B7 |
| 3771 | B7 |
| 3780 | E7 |
| 3781 | E7 |
| 3799 | E2 |
| 5714 | C3 |
| 5719 | D3 |
| 5725 | D3 |
| 5753 | B9 |
| 6732 | C4 |
| 6742 | E4 |
| 6750 | D7 |
| 6760 | D7 |
| 7735 | C5 |
| 7736 | C4 |
| 7745 | D5 |
| 7746 | E4 |
| 7751 | C8 |
| 7753 | C9 |
| 7755 | D8 |
| 7761 | D9 |
| C702 | F3 |
| C703 | E3 |
| C704 | E3 |
| F710 | C2 |
| F711 | C2 |
| F712 | C2 |
| F713 | C2 |
| F714 | C2 |
| F717 | D2 |
| F718 | D2 |
| F719 | D2 |
| F720 | D3 |
| F723 | D2 |
| F724 | D2 |
| F725 | D2 |
| F730 | B5 |
| F732 | C4 |
| F733 | C5 |
| F735 | C5 |
| F736 | C4 |
| F740 | D5 |
| F742 | E4 |
| F743 | E5 |
| F745 | D5 |
| F746 | E4 |
| F759 | C7 |
| F770 | A8 |
| F771 | A8 |
| F772 | A8 |
| F774 | A8 |
| F776 | A8 |
| F777 | A8 |
| F780 | E8 |
| F781 | E8 |
| F782 | F8 |
| F784 | F8 |
| F786 | F8 |
| F787 | F8 |
| F796 | E2 |
| F797 | E2 |
| F798 | E2 |
| F799 | E2 |

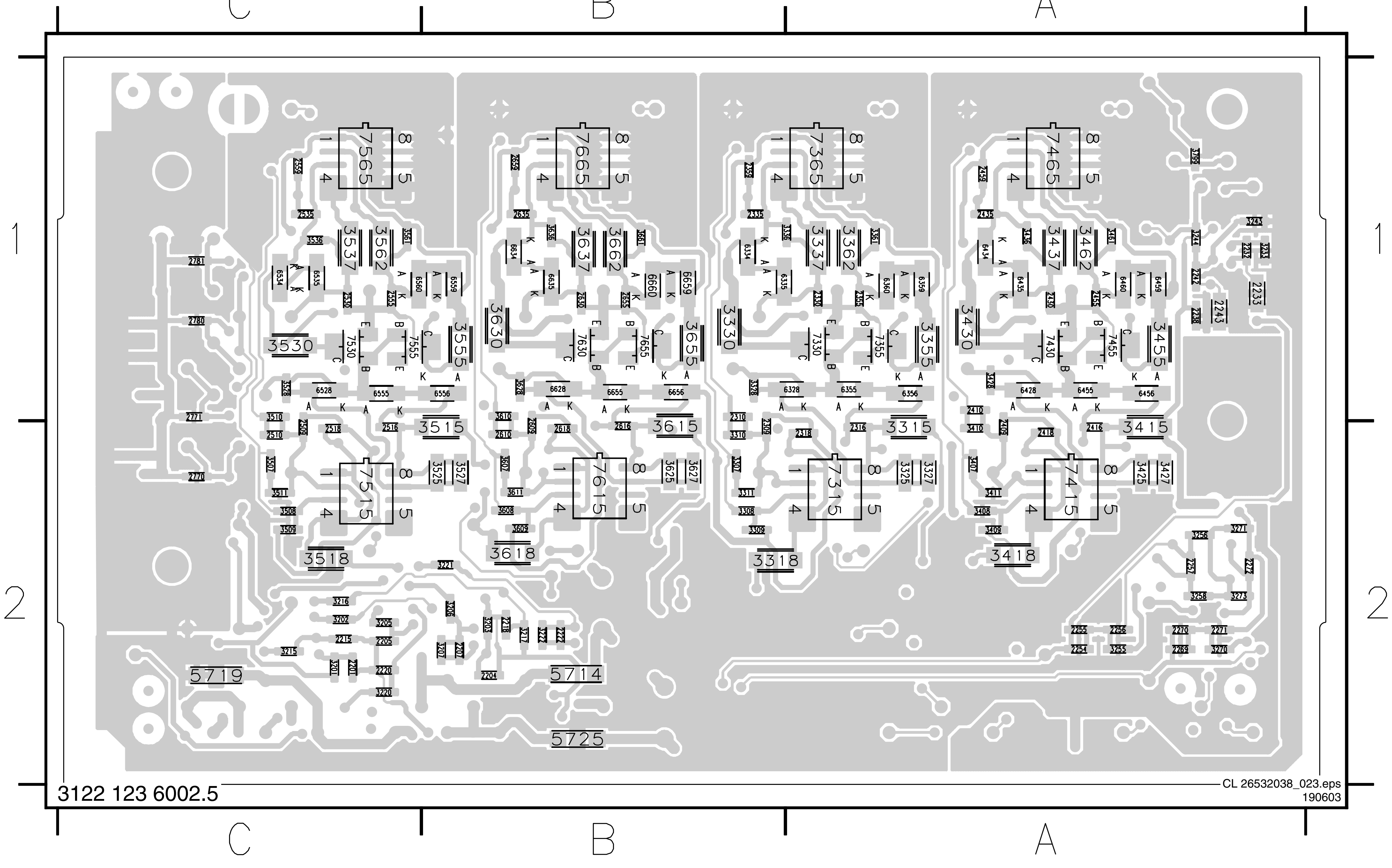
## Layout Audio Panel (Top Side)

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0302 | B1 | 2216 | C1 | 2315 | A1 | 2440 | A2 | 2566 | C2 | 2734 | A1 | 3211 | C1 | 3272 | A1 | 3403 | A1 | 3601 | B1 | 3749 | C2 | 3780 | C2 | 5565 | C2 | 7225 | B1 | 7503 | B1 | 7753 | C1 |
| 0303 | C1 | 2217 | B1 | 2319 | A1 | 2460 | A2 | 2615 | B1 | 2740 | A1 | 3230 | B1 | 3274 | A1 | 3404 | A1 | 3602 | B1 | 3750 | C1 | 3781 | C2 | 5635 | B2 | 7238 | A2 | 7540 | C2 | 7755 | C1 |
| 0304 | C2 | 2221 | B1 | 2334 | A2 | 2465 | A2 | 2619 | B1 | 2742 | A1 | 3231 | A2 | 3301 | A1 | 3406 | A1 | 3603 | B1 | 3751 | C1 | 5335 | A2 | 5660 | B2 | 7260 | A1 | 7602 | B1 | 7761 | C1 |
| 0388 | C1 | 2224 | B1 | 2340 | A2 | 2466 | A2 | 2634 | B2 | 2744 | A1 | 3232 | A2 | 3302 | A1 | 3440 | A2 | 3604 | B1 | 3752 | C1 | 5360 | B2 | 5665 | B2 | 7302 | A1 | 7603 | B1 | | |
| 1730 | B1 | 2225 | B1 | 2360 | B2 | 2515 | C1 | 2640 | B2 | 2752 | C1 | 3234 | A2 | 3303 | A1 | 3501 | B1 | 3606 | B1 | 3754 | C1 | 5365 | A2 | 5753 | C1 | 7303 | B1 | 7640 | B2 | | |
| 1740 | B1 | 2234 | A2 | 2365 | B2 | 2519 | C1 | 2660 | B2 | 2753 | C1 | 3240 | B1 | 3304 | A1 | 3502 | C1 | 3640 | B2 | 3755 | B1 | 5435 | A2 | 6732 | A1 | 7340 | A2 | 7735 | A1 | | |
| 2202 | C1 | 2239 | A2 | 2366 | B2 | 2534 | B2 | 2665 | B2 | 2759 | C1 | 3241 | A2 | 3306 | B1 | 3503 | B1 | 3732 | A1 | 3760 | C1 | 5460 | A2 | 6742 | A1 | 7402 | A1 | 7736 | A1 | | |
| 2203 | B1 | 2244 | A2 | 2415 | A1 | 2540 | C2 | 2666 | B2 | 2760 | C1 | 3242 | A2 | 3340 | A2 | 3504 | B1 | 3733 | A1 | 3765 | B1 | 5465 | A2 | 6750 | C1 | 7403 | A1 | 7745 | A1 | | |
| 2206 | C1 | 2260 | A1 | 2419 | A1 | 2560 | C2 | 2730 | B1 | 2799 | A1 | 3257 | A1 | 3401 | A1 | 3506 | C1 | 3742 | A1 | 3770 | C1 | 5535 | B2 | 6760 | C1 | 7440 | A2 | 7746 | A1 | | |
| 2212 | C1 | 2261 | A1 | 2434 | A2 | 2565 | C2 | 2732 | B1 | 3210 | C1 | 3259 | A1 | 3402 | A1 | 3540 | B2 | 3743 | A1 | 3771 | C1 | 5560 | C2 | 7211 | C1 | 7502 | C1 | 7751 | C1 | | |


C
B
A
1
2
0388
0302
1740
1730
2732
2742
7735
7736
7745
2744
2202
2216
2206
7225
2752
2753
2221
2730
2734
2740
7260
7403
7402
7303
7302
7603
7602
7502
7503
7761
7751
7755
2515
2760
2519
2619
2615
2319
2315
2419
2415
0303
0304
7540
5535
5560
5660
7640
5635
5360
7340
5335
5460
7440
5435
2560
2534
2660
2634
2360
2334
2460
2434
7238
5565
5665
5365
5465
2566
2565
2666
2665
2366
2365
2466
2465
6742
6732
6750
6760
3122 123 6002.5
CL 26532038_022.eps
190603

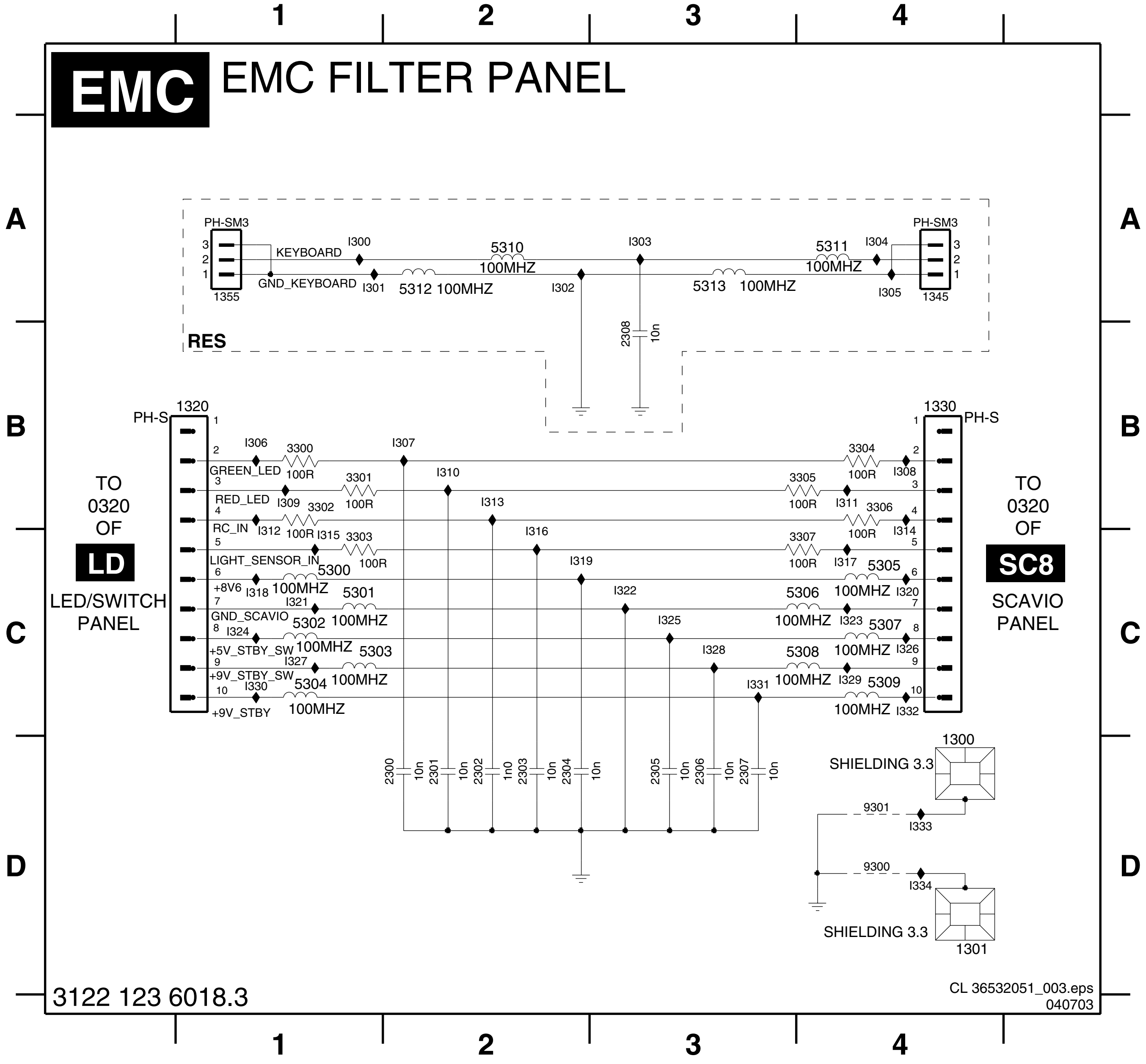
## Layout Audio Panel (Bottom Side)

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2201 | C2 | 2255 | A2 | 2359 | B1 | 2535 | C1 | 2781 | C1 | 3243 | A1 | 3318 | B2 | 3411 | A2 | 3509 | C2 | 3607 | B2 | 3661 | B1 | 6434 | A1 | 6634 | B1 | 7515 | C2 |
| 2204 | B2 | 2256 | A2 | 2409 | A2 | 2555 | C1 | 3201 | C2 | 3244 | A1 | 3325 | A2 | 3415 | A2 | 3510 | C1 | 3608 | B2 | 3662 | B1 | 6435 | A1 | 6635 | B1 | 7530 | C1 |
| 2205 | C2 | 2257 | A2 | 2410 | A1 | 2559 | C1 | 3202 | C2 | 3255 | A2 | 3327 | A2 | 3418 | A2 | 3511 | C2 | 3609 | B2 | 3799 | A1 | 6455 | A1 | 6655 | B1 | 7555 | C1 |
| 2207 | B2 | 2269 | A2 | 2416 | A2 | 2609 | B2 | 3203 | B2 | 3256 | A2 | 3328 | B1 | 3425 | A2 | 3515 | B2 | 3610 | B1 | 5714 | B2 | 6456 | A1 | 6656 | B1 | 7565 | C1 |
| 2215 | C2 | 2270 | A2 | 2418 | A2 | 2610 | B2 | 3205 | C2 | 3258 | A2 | 3330 | B1 | 3427 | A2 | 3518 | C2 | 3611 | B2 | 5719 | C2 | 6459 | A1 | 6659 | B1 | 7615 | B2 |
| 2218 | B2 | 2271 | A2 | 2430 | A1 | 2616 | B2 | 3206 | B2 | 3270 | A2 | 3336 | A1 | 3428 | A1 | 3525 | B2 | 3615 | B2 | 5725 | B2 | 6460 | A1 | 6660 | B1 | 7630 | B1 |
| 2220 | C2 | 2272 | A2 | 2435 | A1 | 2618 | B2 | 3207 | B2 | 3271 | A2 | 3337 | A1 | 3430 | A1 | 3527 | B2 | 3618 | B2 | 6328 | A1 | 6528 | C1 | 7315 | A2 | 7655 | B1 |
| 2222 | B2 | 2309 | B2 | 2455 | A1 | 2630 | B1 | 3215 | C2 | 3273 | A2 | 3355 | A1 | 3436 | A1 | 3528 | C1 | 3625 | B2 | 6334 | B1 | 6534 | C1 | 7330 | A1 | 7665 | B1 |
| 2232 | A1 | 2310 | B1 | 2459 | A1 | 2635 | B1 | 3216 | C2 | 3307 | B2 | 3361 | A1 | 3437 | A1 | 3530 | C1 | 3627 | B2 | 6335 | B1 | 6535 | C1 | 7355 | A1 | | |
| 2233 | A1 | 2316 | A2 | 2509 | C2 | 2655 | B1 | 3217 | B2 | 3308 | B2 | 3362 | A1 | 3455 | A1 | 3536 | C1 | 3628 | B1 | 6355 | A1 | 6555 | C1 | 7365 | A1 | | |
| 2238 | A1 | 2318 | A2 | 2510 | C2 | 2659 | B1 | 3220 | C2 | 3309 | B2 | 3407 | A2 | 3461 | A1 | 3537 | C1 | 3630 | B1 | 6356 | A1 | 6556 | B1 | 7415 | A2 | | |
| 2242 | A1 | 2330 | A1 | 2516 | C2 | 2770 | C2 | 3221 | B2 | 3310 | B2 | 3408 | A2 | 3462 | A1 | 3555 | B1 | 3636 | B1 | 6359 | A1 | 6559 | B1 | 7430 | A1 | | |
| 2243 | A1 | 2335 | B1 | 2518 | C2 | 2771 | C1 | 3222 | B2 | 3311 | B2 | 3409 | A2 | 3507 | C2 | 3561 | C1 | 3637 | B1 | 6360 | A1 | 6560 | C1 | 7455 | A1 | | |
| 2254 | A2 | 2355 | A1 | 2530 | C1 | 2780 | C1 | 3233 | A1 | 3315 | A2 | 3410 | A2 | 3508 | C2 | 3562 | C1 | 3655 | B1 | 6428 | A1 | 6628 | B1 | 7465 | A1 | | |


C
B
A
1
2
7565
7665
7365
7465
3530
3555
3630
3655
3330
3355
3430
3455
3515
3615
3315
3415
7515
7615
7315
7415
3518
3618
3318
3418
5719
5714
5725
3122 123 6002.5
CL 26532038_023.eps
190603

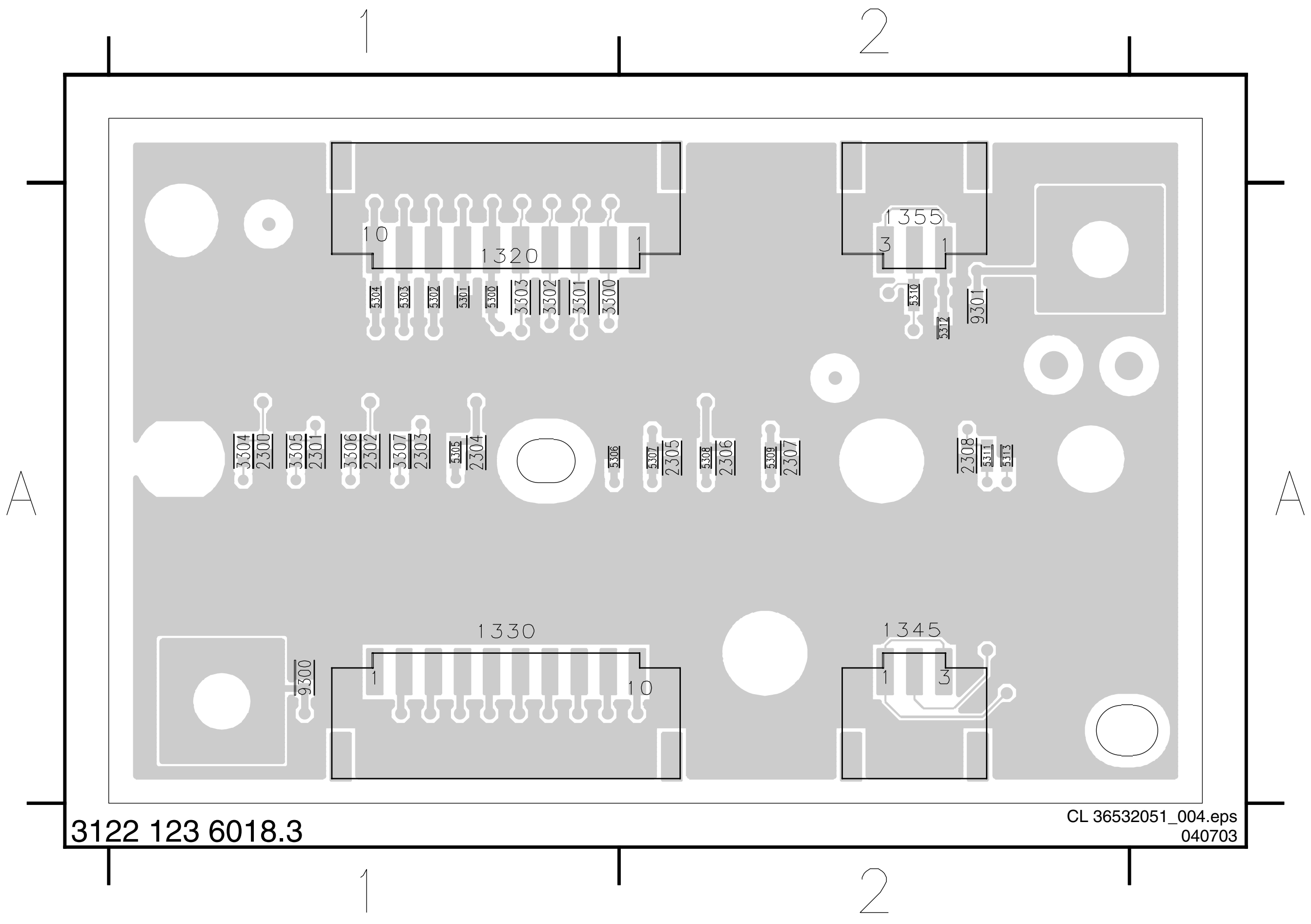
## EMC Filter Panel

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1300 D4 | 2301 D2 | 2308 A3 | 3306 B4 | 5305 C4 | 5312 A2 | I303 A3 | I310 B2 | I317 C4 | I324 C1 | I331 C3 |
| 1301 D4 | 2302 D2 | 3300 B1 | 3307 C4 | 5306 C4 | 5313 A3 | I304 A4 | I311 B4 | I318 C1 | I325 C3 | I332 C4 |
| 1320 B1 | 2303 D2 | 3301 B1 | 5300 C1 | 5307 C4 | 9300 D4 | I305 A4 | I312 C1 | I319 C2 | I326 C4 | I333 D4 |
| 1330 B4 | 2304 D2 | 3302 B1 | 5301 C1 | 5308 C4 | 9301 D4 | I306 B1 | I313 B2 | I320 C4 | I327 C1 | I334 D4 |
| 1345 A4 | 2305 D3 | 3303 C1 | 5302 C1 | 5309 C4 | I300 A1 | I307 B2 | I314 C4 | I321 C1 | I328 C3 | |
| 1355 A1 | 2306 D3 | 3304 B4 | 5303 C1 | 5310 A2 | I301 A1 | I308 B4 | I315 C1 | I322 C3 | I329 C4 | |
| 2300 D2 | 2307 D3 | 3305 B4 | 5304 C1 | 5311 A4 | I302 A2 | I309 B1 | I316 C2 | I323 C4 | I330 C1 | |

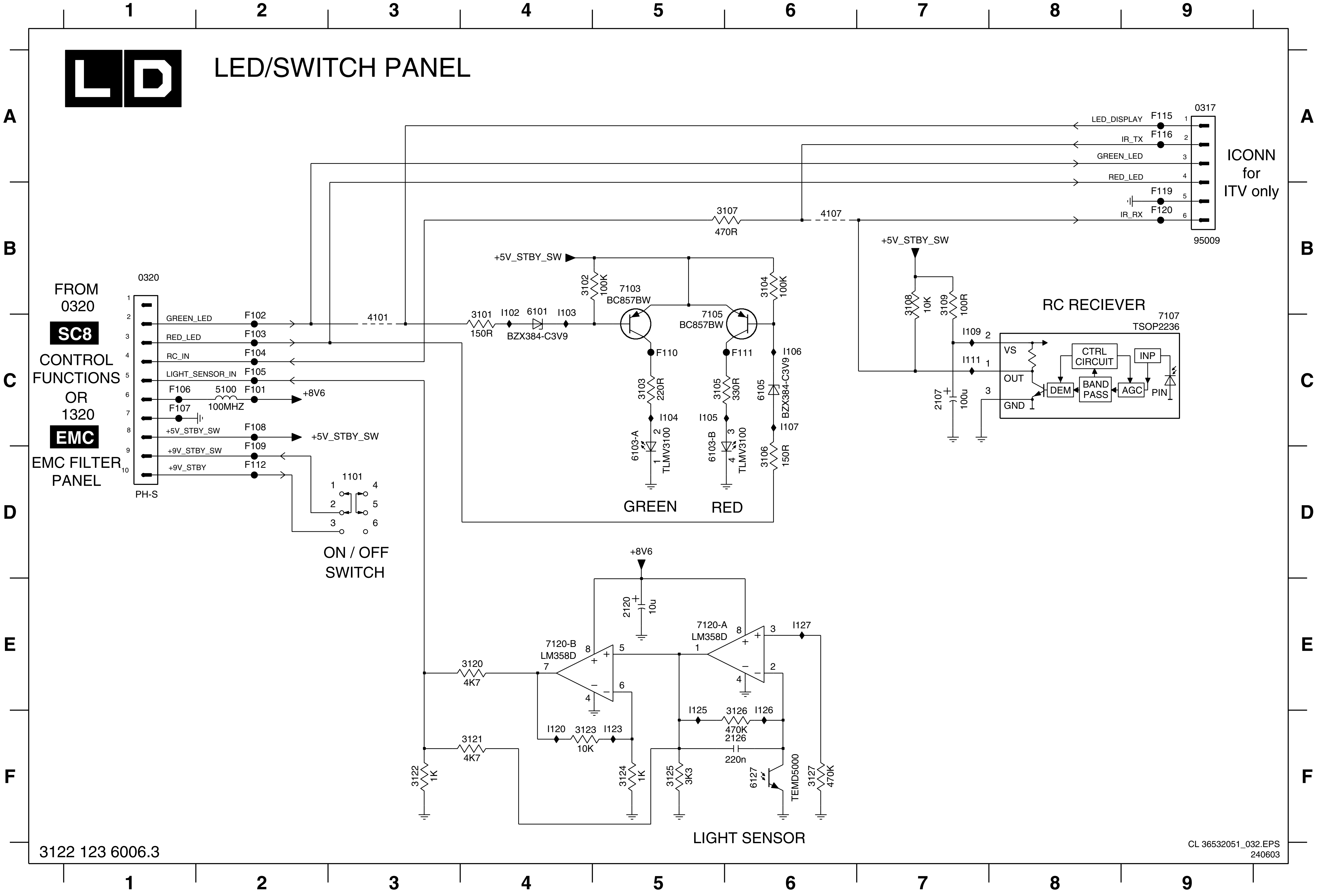

1
2
3
4
A
B
C
D
EMC
EMC FILTER PANEL
PH-SM3
KEYBOARD
GND_KEYBOARD
1355
1345
I300
I301
I302
I303
I304
I305
5310
100MHZ
5312 100MHZ
5313 100MHZ
5311
100MHZ
2308
10n
RES
1320
1330
PH-S
TO
0320
OF
LD
LED/SWITCH
PANEL
TO
0320
OF
SC8
SCAVIO
PANEL
GREEN_LED
RED_LED
RC_IN
LIGHT_SENSOR_IN
+8V6
GND_SCAVIO
+5V_STBY_SW
+9V_STBY_SW
+9V_STBY
3300
3301
3302
3303
3304
3305
3306
3307
100R
5300
5301
5302
5303
5304
5305
5306
5307
5308
5309
100MHZ
2300
2301
2302
2303
2304
2305
2306
2307
10n
1n0
SHIELDING 3.3
1300
1301
9300
9301
I333
I334
3122 123 6018.3
CL 36532051_003.eps
040703

## Layout EMC Filter Panel (Top Side)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1320 A1 | 2300 A1 | 2304 A1 | 2308 A2 | 3303 A1 | 3307 A1 | 5303 A1 | 5307 A2 | 5311 A2 | 9301 A2 |
| 1330 A1 | 2301 A1 | 2305 A2 | 3300 A1 | 3304 A1 | 5300 A1 | 5304 A1 | 5308 A2 | 5312 A2 | |
| 1345 A2 | 2302 A1 | 2306 A2 | 3301 A1 | 3305 A1 | 5301 A1 | 5305 A1 | 5309 A2 | 5313 A2 | |
| 1355 A2 | 2303 A1 | 2307 A2 | 3302 A1 | 3306 A1 | 5302 A1 | 5306 A1 | 5310 A2 | 9300 A1 | |

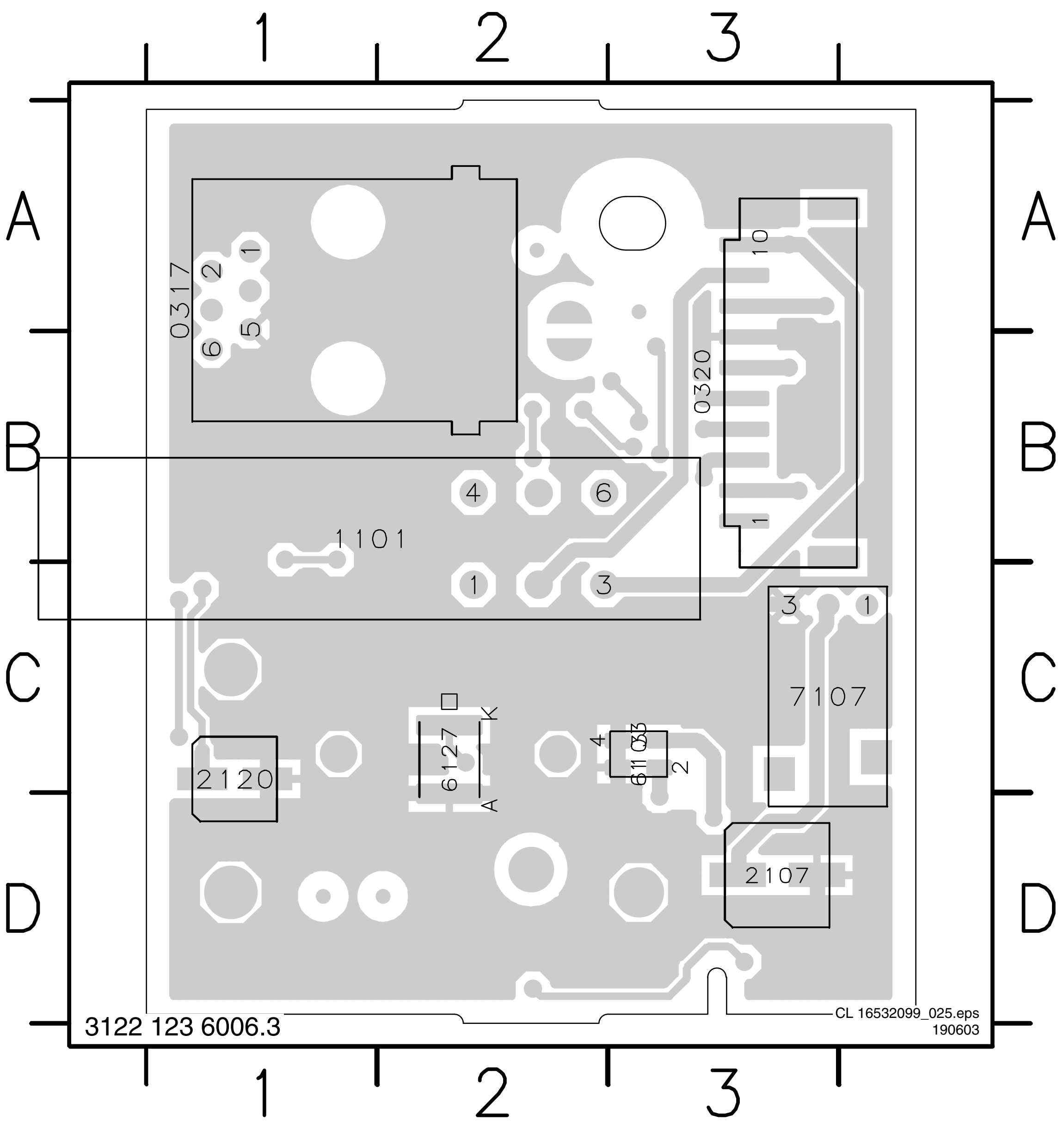

1
2
A
1320
1330
1345
1355
9300
9301
3122 123 6018.3
CL 36532051_004.eps
040703

## LED/Switch Panel (for Sets with Speakers)


LD
LED/SWITCH PANEL
1 2 3 4 5 6 7 8 9
A B C D E F
FROM 0320
SC8
CONTROL FUNCTIONS
OR 1320
EMC
EMC FILTER PANEL
0320
PH-S
GREEN_LED
RED_LED
RC_IN
LIGHT_SENSOR_IN
+5V_STBY_SW
+9V_STBY_SW
+9V_STBY
F101
F102
F103
F104
F105
F106
F107
F108
F109
F112
5100
100MHZ
+8V6
+5V_STBY_SW
4101
3101
150R
I102
6101
I103
BZX384-C3V9
1101
ON / OFF SWITCH
+5V_STBY_SW
3102
100K
7103
BC857BW
7105
BC857BW
3104
100K
F110
F111
I106
3103
220R
3105
330R
6105
BZX384-C3V9
I104
I105
I107
6103-A
6103-B
TLMV3100
3106
150R
GREEN
RED
3107
470R
4107
LED_DISPLAY
IR_TX
GREEN_LED
RED_LED
IR_RX
F115
F116
F119
F120
0317
95009
ICONN for ITV only
+5V_STBY_SW
3108
10K
3109
100R
I109
I111
2107
100u
RC RECIEVER
7107
TSOP2236
VS
OUT
GND
CTRL CIRCUIT
INP
DEM
BAND PASS
AGC
PIN
+8V6
2120
10u
7120-B
LM358D
7120-A
LM358D
I127
3120
4K7
3121
4K7
3122
1K
I120
3123
10K
I123
3124
1K
I125
3126
470K
I126
2126
220n
3125
3K3
6127
TEMD5000
3127
470K
LIGHT SENSOR
3122 123 6006.3
CL 36532051_032.EPS
240603

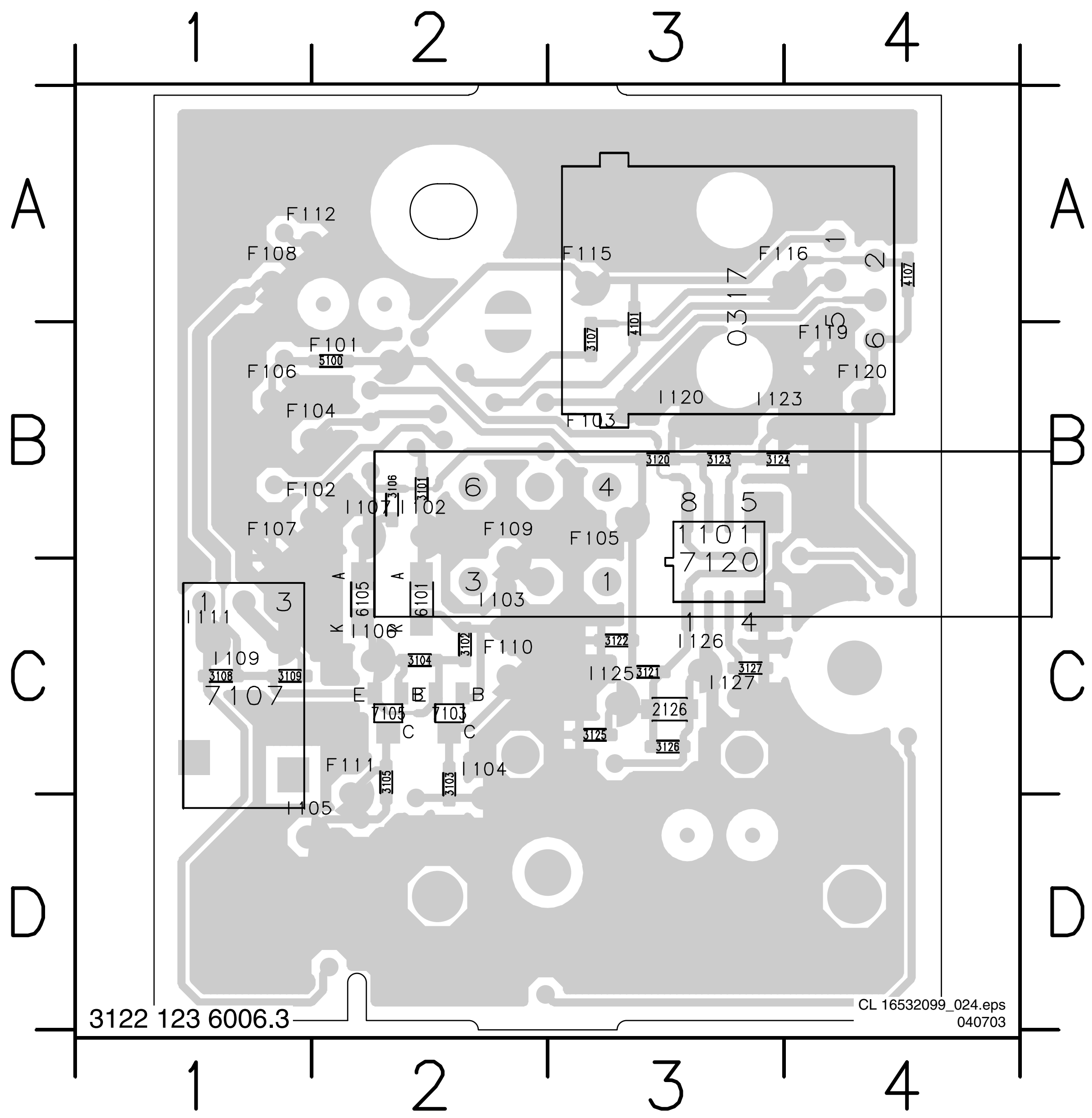
| | |
|---|---|
| **0317** | **A9** |
| **0320** | **B1** |
| **1101** | **D3** |
| **2107** | **C7** |
| **2120** | **E5** |
| **2126** | **F6** |
| **3100** | **C2** |
| **3101** | **C4** |
| **3102** | **B4** |
| **3103** | **C5** |
| **3104** | **B6** |
| **3105** | **C5** |
| **3106** | **D6** |
| **3107** | **B6** |
| **3108** | **B7** |
| **3109** | **B7** |
| **3120** | **E4** |
| **3121** | **F4** |
| **3122** | **F3** |
| **3123** | **F4** |
| **3124** | **F5** |
| **3125** | **F5** |
| **3126** | **F6** |
| **3127** | **F6** |
| **4101** | **C3** |
| **4107** | **B6** |
| **6101** | **C4** |
| **6103-A** | **C5** |
| **6103-B** | **D5** |
| **6105** | **C6** |
| **6127** | **F6** |
| **7103** | **B5** |
| **7105** | **B5** |
| **7107** | **C9** |
| **7120-A** | **E6** |
| **7120-B** | **E4** |
| **F101** | **C2** |
| **F102** | **C2** |
| **F103** | **C2** |
| **F104** | **C2** |
| **F105** | **C2** |
| **F106** | **C1** |
| **F107** | **C1** |
| **F108** | **C2** |
| **F109** | **D2** |
| **F110** | **C5** |
| **F111** | **C6** |
| **F112** | **D2** |
| **F115** | **A9** |
| **F116** | **A9** |
| **F119** | **B9** |
| **F120** | **B9** |
| **I102** | **B4** |
| **I103** | **B4** |
| **I104** | **C5** |
| **I105** | **C5** |
| **I106** | **C6** |
| **I107** | **C6** |
| **I109** | **C7** |
| **I111** | **C7** |
| **I120** | **F4** |
| **I123** | **F5** |
| **I125** | **E5** |
| **I126** | **E6** |
| **I127** | **E6** |

## Layout LED/Switch Panel (for Sets with Speakers) (Top Side)


1
2
3
A
B
C
D
0317
1
2
5
6
0320
10
1101
4
6
1
3
7107
2120
6127
K
A
6103
2107
3122 123 6006.3
CL 16532099_025.eps
190603

| | |
|---|---|
| 0317 | A1 |
| 0320 | B3 |
| 1101 | B1 |
| 2107 | D3 |
| 2120 | C1 |
| 6103 | C3 |
| 6127 | C2 |
| 7107 | C3 |

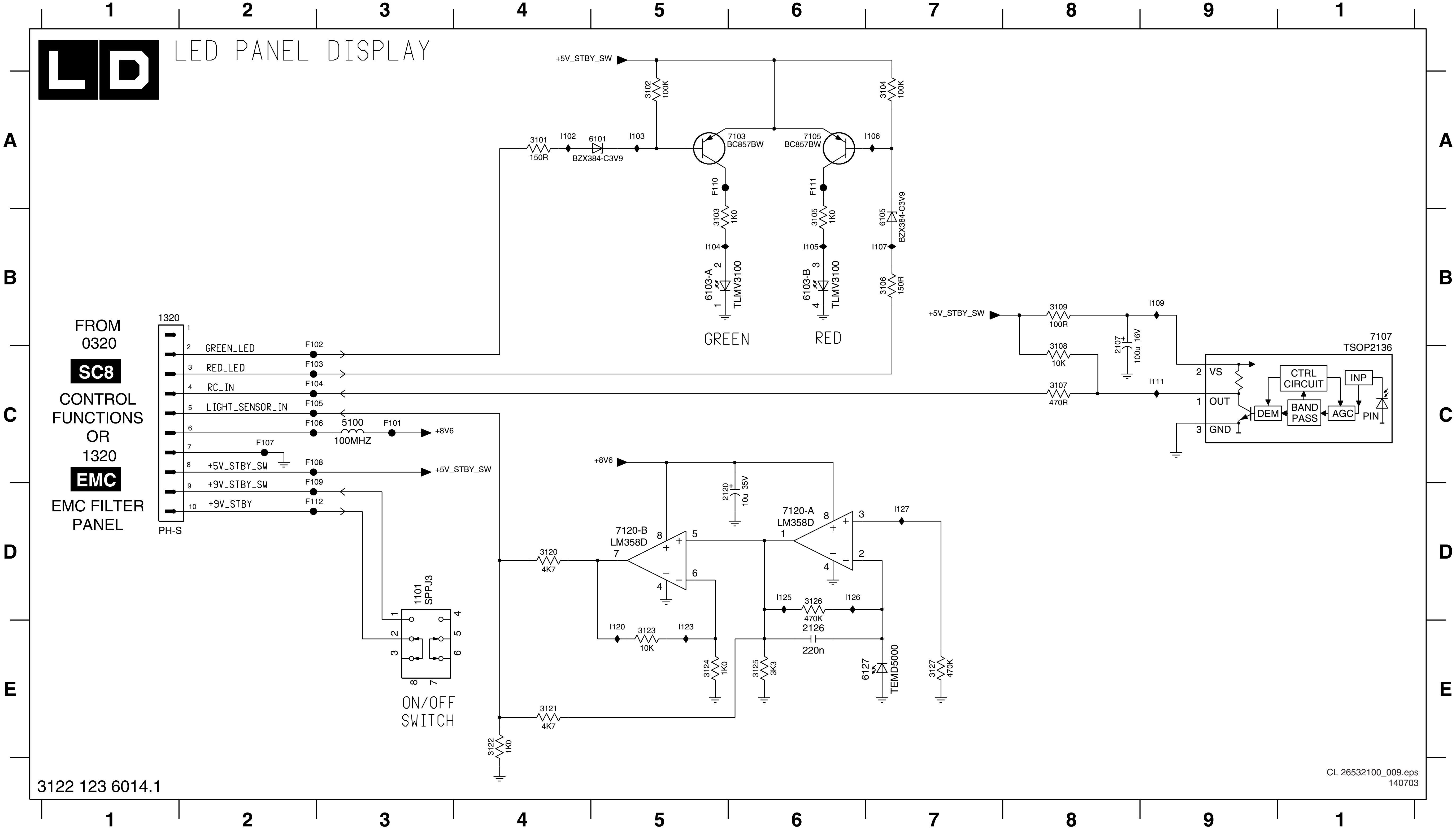
## Layout LED/Switch Panel (for Sets with Speakers) (Bottom Side)


1
2
3
4
A
B
C
D
F112
F108
F115
F116
0317
F101
F106
F104
F119
F120
I120
I123
F103
F102
F107
I107
I102
F109
F105
1101
7120
I103
I111
I109
7107
I106
F110
I126
I125
I127
2126
F111
I104
I105
6105
6101
7105
7103
3122 123 6006.3
CL 16532099_024.eps
040703

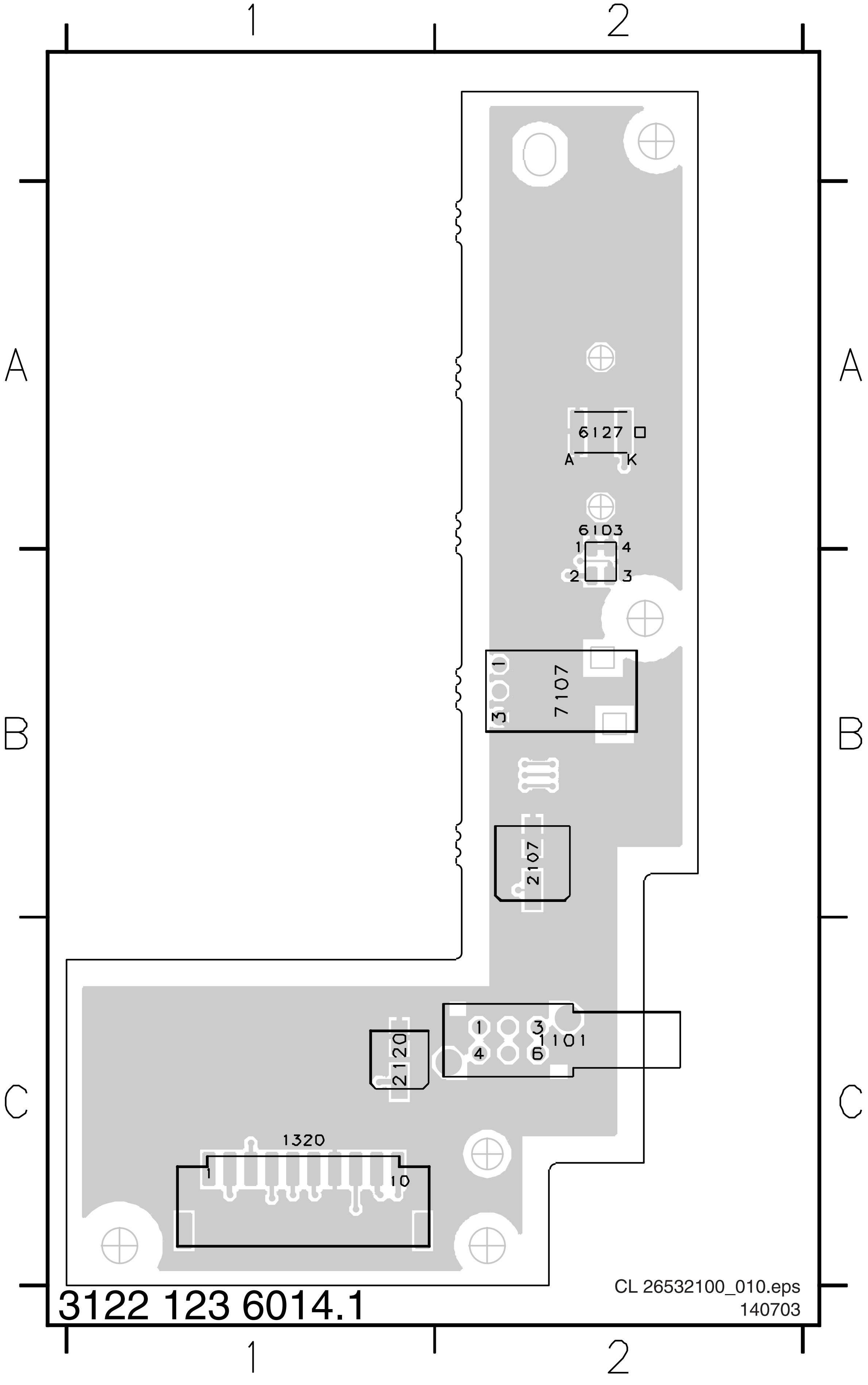
| | |
|---|---|
| 0317 | A4 |
| 1101 | B3 |
| 2126 | C3 |
| 3101 | B2 |
| 3102 | C2 |
| 3103 | C2 |
| 3104 | C2 |
| 3105 | C2 |
| 3106 | B2 |
| 3107 | B3 |
| 3108 | C1 |
| 3109 | C1 |
| 3120 | B3 |
| 3121 | C3 |
| 3122 | C3 |
| 3123 | B3 |
| 3124 | B3 |
| 3125 | C3 |
| 3126 | C3 |
| 3127 | C3 |
| 4101 | B3 |
| 4107 | A4 |
| 5100 | B2 |
| 6101 | C2 |
| 6105 | C2 |
| 7103 | C2 |
| 7105 | C2 |
| 7107 | C1 |
| 7120 | C3 |

## LED Panel Display (for Speakerless Sets)

1101 D3
1320 B1
2107 B8
2120 D5
2126 E6
3101 A4
3102 A5
3103 B5
3104 A7
3105 B6
3106 B7
3107 C8
3108 C8
3109 B8
3120 D4
3121 E4
3122 E4
3123 E5
3124 E5
3125 E6
3126 D6
3127 E7
5100 C2
6101 A5
6103-A B5
6103-B B6
6105 B7
6127 E7
7103 A5
7105 A6
7107 B10
7120-A D6
7120-B D5
F101 C2
F102 C2
F103 C2
F104 C2
F105 C2
F106 C2
F107 C2
F108 C2
F109 D2
F110 A5
F111 A6
F112 D2
I102 A4
I103 A5
I104 B5
I105 B6
I106 A7
I107 B7
I109 B9
I111 C9
I120 E5
I123 E5
I125 D6
I126 D6
I127 D7


LD
LED PANEL DISPLAY
FROM 0320
SC8
CONTROL FUNCTIONS OR 1320
EMC
EMC FILTER PANEL
1320
PH-S
GREEN_LED
RED_LED
RC_IN
LIGHT_SENSOR_IN
+5V_STBY_SW
+9V_STBY_SW
+9V_STBY
5100 100MHZ
+8V6
+5V_STBY_SW
3101 150R
6101 BZX384-C3V9
3102 100K
3104 100K
7103 BC857BW
7105 BC857BW
3103 1K0
3105 1K0
6103-A TLMV3100
6103-B TLMV3100
6105 BZX384-C3V9
3106 150R
GREEN
RED
3109 100R
3108 10K
3107 470R
2107 100u 16V
7107 TSOP2136
VS
OUT
GND
CTRL CIRCUIT
INP
DEM
BAND PASS
AGC
PIN
2120 10u 35V
7120-B LM358D
7120-A LM358D
3120 4K7
3121 4K7
3122 1K0
3123 10K
3124 1K0
3125 3K3
3126 470K
2126 220n
6127 TEMD5000
3127 470K
1101 SPPJ3
ON/OFF SWITCH
3122 123 6014.1
CL 26532100_009.eps
140703

## Layout LED Panel Display (for Speakerless Sets) (Top Side)

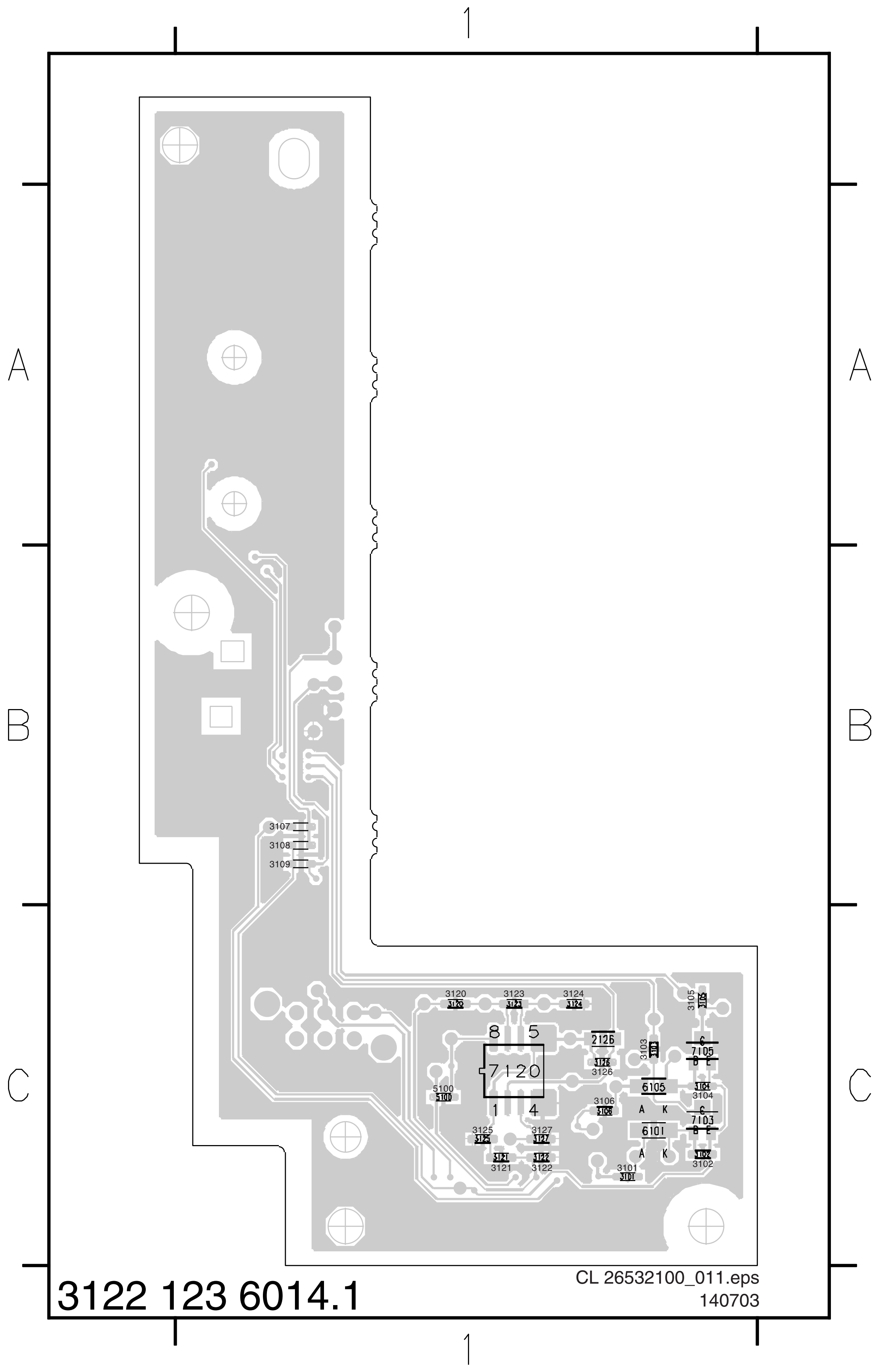

1
2
A
B
C
6127
A
K
6103
1
4
2
3
7107
1
3
2107
2120
1101
1
3
4
6
1320
1
10

3122 123 6014.1

CL 26532100_010.eps
140703

| | |
|---|---|
| 1101 | C 2 |
| 1320 | C1 |
| 2107 | B2 |
| 2120 | C1 |
| 6103 | A2 |
| 6127 | A2 |
| 7107 | B2 |

## Layout LED Panel Display (for Speakerless Sets) (Bottom Side)

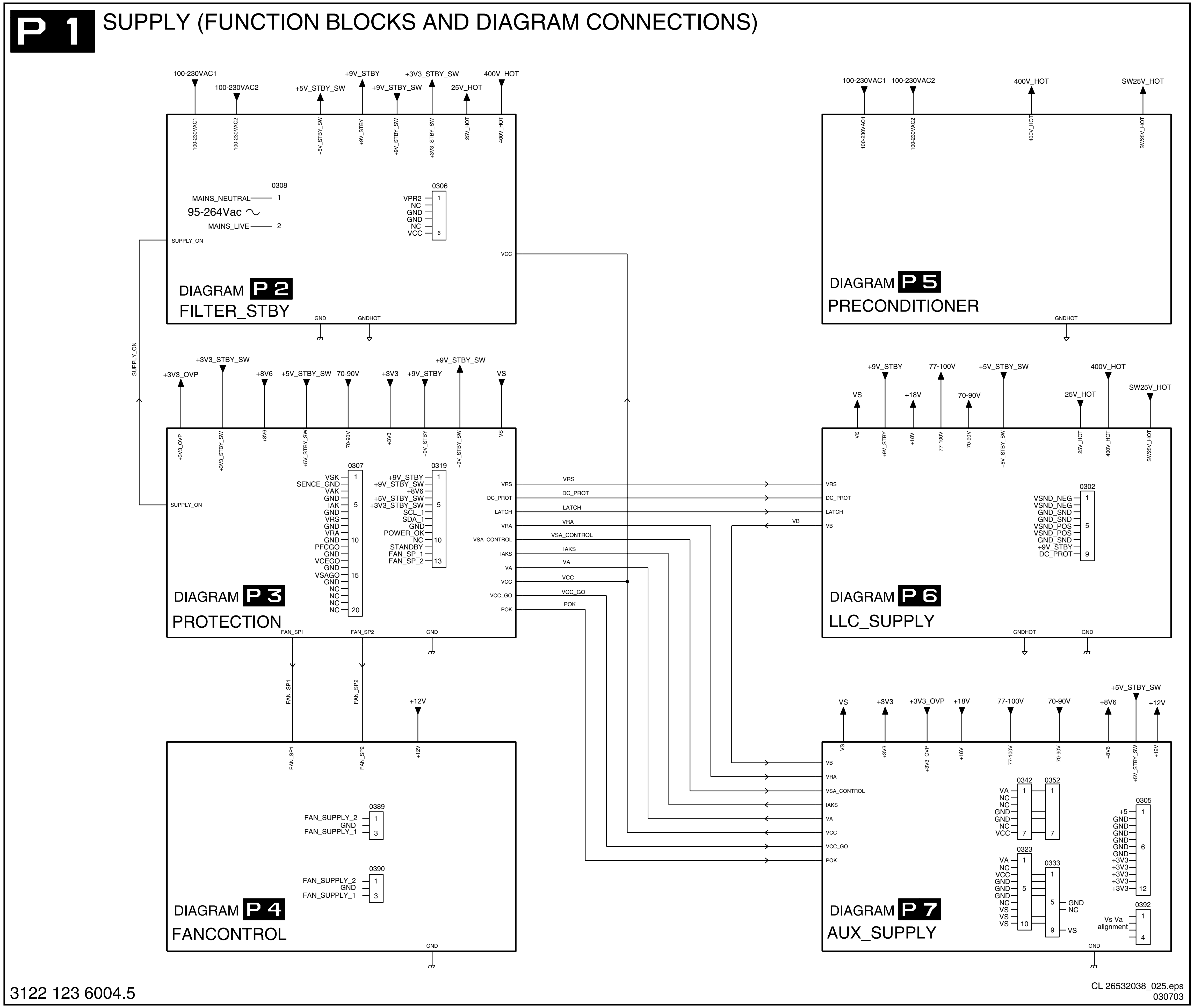

1
A
B
C
3107
3108
3109
3120
3123
3124
3105
2126
8
5
7120
1
4
3126
3103
7105
5100
6105
3104
3106
A
K
6101
7103
3125
3127
3121
3122
3101
3102

3122 123 6014.1

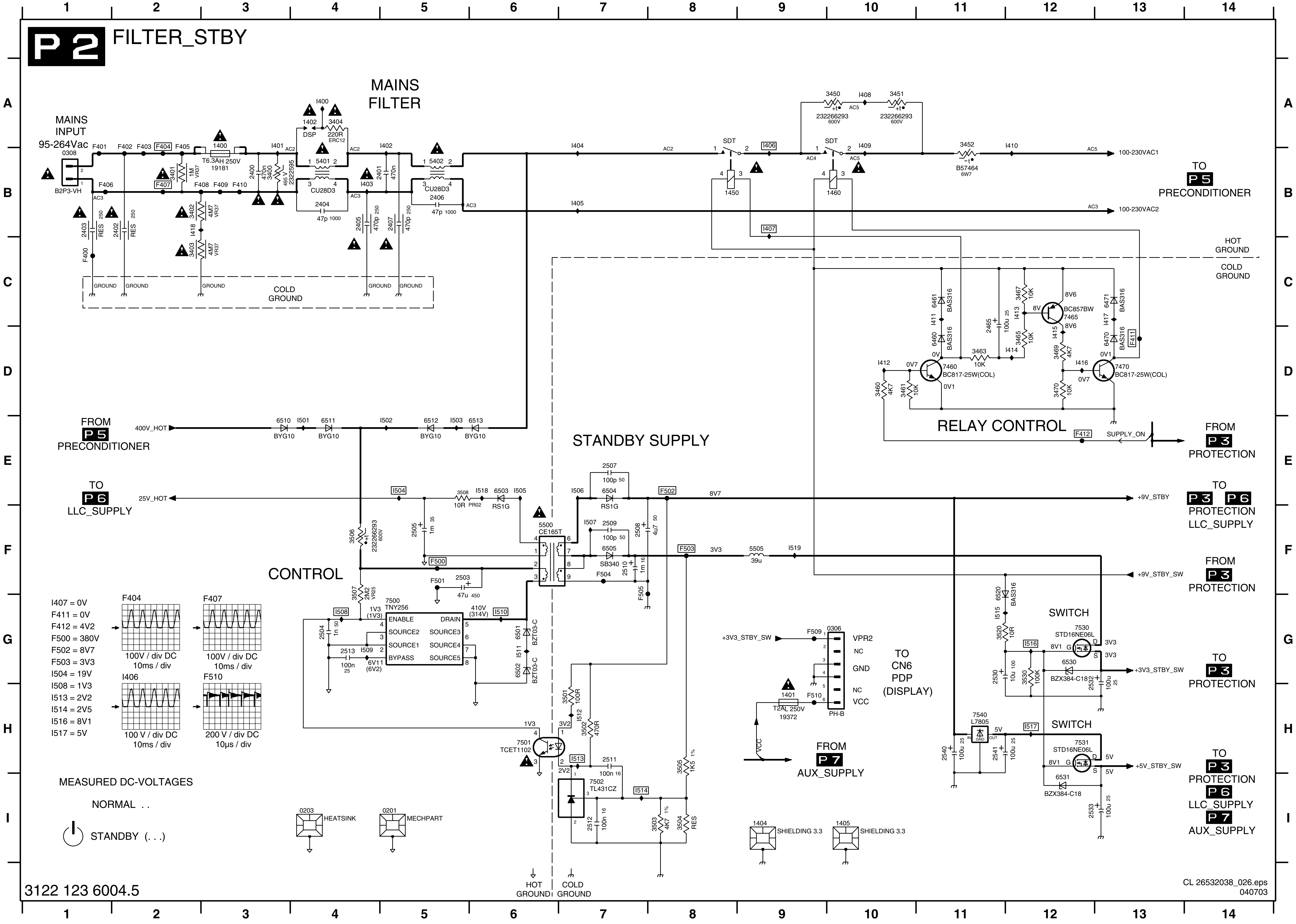
CL 26532100_011.eps
140703

| | |
|---|---|
| 2126 | C1 |
| 3101 | C1 |
| 3102 | C1 |
| 3103 | C1 |
| 3104 | C1 |
| 3105 | C1 |
| 3106 | C1 |
| 3107 | B1 |
| 3108 | B1 |
| 3109 | B1 |
| 3120 | C1 |
| 3121 | C1 |
| 3122 | C1 |
| 3123 | C1 |
| 3124 | C1 |
| 3125 | C1 |
| 3126 | C1 |
| 3127 | C1 |
| 5100 | C1 |
| 6101 | C1 |
| 6105 | C1 |
| 7103 | C1 |
| 7105 | C1 |
| 7120 | C1 |

## Power Supply Panel (FM23 AC): Function Blocks and Connection Diagram


P 1
SUPPLY (FUNCTION BLOCKS AND DIAGRAM CONNECTIONS)
100-230VAC1
100-230VAC2
+5V_STBY_SW
+9V_STBY
+9V_STBY_SW
+3V3_STBY_SW
25V_HOT
400V_HOT
0308
MAINS_NEUTRAL 1
95-264Vac ~
MAINS_LIVE 2
SUPPLY_ON
0306
VPR2 1
NC
GND
GND
NC
VCC 6
VCC
DIAGRAM P 2
FILTER_STBY
GND
GNDHOT
DIAGRAM P 5
PRECONDITIONER
SW25V_HOT
+3V3_OVP
+8V6
70-90V
+3V3
VS
0307
VSK 1
SENCE_GND
VAK
GND
IAK 5
GND
VRS
GND
VRA
GND 10
PFCGO
GND
VCEGO
GND
VSAGO 15
GND
NC
NC
NC
NC 20
0319
+9V_STBY 1
+9V_STBY_SW
+8V6
+5V_STBY_SW
+3V3_STBY_SW 5
SCL_1
SDA_1
GND
POWER_OK
NC 10
STANDBY
FAN_SP_1
FAN_SP_2 13
VRS
DC_PROT
LATCH
VRA
VSA_CONTROL
IAKS
VA
VCC
VCC_GO
POK
VB
DIAGRAM P 3
PROTECTION
FAN_SP1
FAN_SP2
+18V
77-100V
0302
VSND_NEG 1
VSND_NEG
GND_SND
GND_SND
VSND_POS 5
VSND_POS
GND_SND
+9V_STBY
DC_PROT 9
DIAGRAM P 6
LLC_SUPPLY
+12V
0389
FAN_SUPPLY_2 1
GND
FAN_SUPPLY_1 3
0390
FAN_SUPPLY_2 1
GND
FAN_SUPPLY_1 3
DIAGRAM P 4
FANCONTROL
0342
VA 1
NC
NC
GND
GND
NC
VCC 7
0352
1
7
0323
VA 1
NC
VCC
GND
GND 5
GND
NC
VS
VS
VS 10
0333
1
5 GND
NC
9 VS
0305
+5 1
GND
GND
GND
GND
GND 6
GND
+3V3
+3V3
+3V3
+3V3
+3V3 12
0392
1
Vs Va alignment
4
DIAGRAM P 7
AUX_SUPPLY
3122 123 6004.5
CL 26532038_025.eps
030703

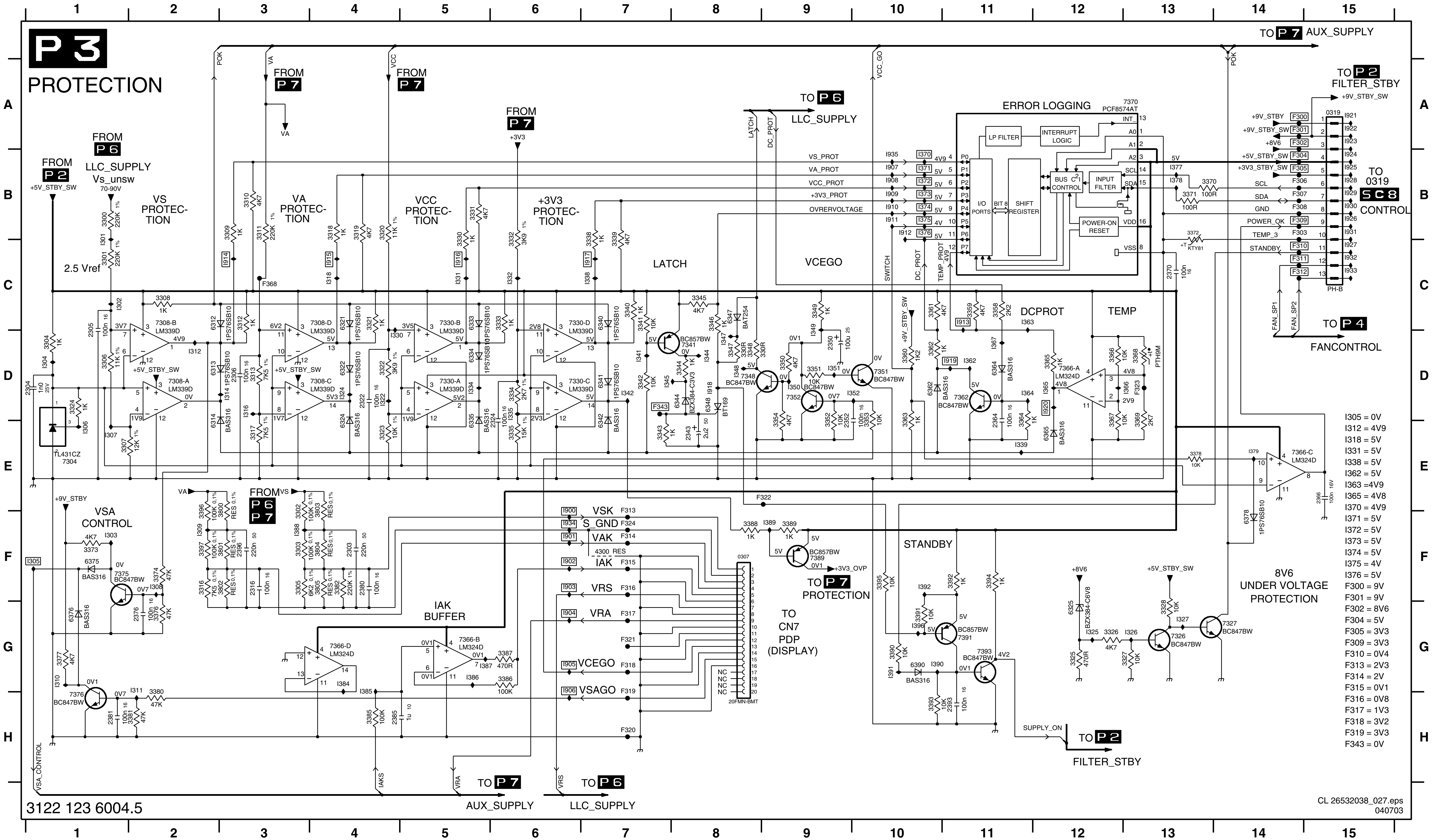
## Power Supply Panel (FM23 AC): Mains Filter and Standby Supply


P 2
FILTER_STBY
MAINS INPUT
95-264Vac
0308
B2P3-VH
MAINS FILTER
F401
F402
F403
F404
F405
F406
F407
F408
F409
F410
F400
1400
T6.3AH 250V
19181
1402
DSP
I400
3404
220R
ERC12
I401
AC2
AC3
5401
CU28D3
5402
I402
I403
2400
470n
3400
2322595
2401
470n
2402
2403
RES
250
3401
1M
VR37
3402
4M7
I418
3403
4M7
2404
47p 1000
2405
470p
2406
47p 1000
2407
470p
GROUND
COLD GROUND
I404
I405
SDT
I406
1450
I407
3450
232266293
600V
I408
3451
232266293
600V
I409
AC4
AC5
1460
3452
B57464
6W7
I410
100-230VAC1
100-230VAC2
TO
P 5
PRECONDITIONER
HOT GROUND
COLD GROUND
6461
BAS316
6460
BAS316
I411
2465
100u 25
3467
10K
I413
8V6
8V
BC857BW
7465
3465
10K
I414
I415
6471
BAS316
6470
BAS316
I417
F411
3463
10K
0V
0V7
I412
7460
BC817-25W(COL)
0V1
3460
4K7
3461
10K
3469
4K7
I416
0V1
0V7
7470
BC817-25W(COL)
3470
10K
RELAY CONTROL
F412
SUPPLY_ON
FROM
P 3
PROTECTION
FROM
P 5
PRECONDITIONER
400V_HOT
6510
BYG10
I501
6511
BYG10
I502
6512
BYG10
I503
6513
BYG10
STANDBY SUPPLY
TO
P 6
LLC_SUPPLY
25V_HOT
I504
3508
10R
PR02
I518
6503
RS1G
I505
I506
2507
100p 50
6504
RS1G
F502
8V7
+9V_STBY
TO
P 3
P 6
PROTECTION
LLC_SUPPLY
2505
1m 35
3506
232266293
600V
5500
CE165T
I507
2509
100p 50
2508
4u7 50
6505
SB340
F503
3V3
5505
39u
I519
F500
F501
2503
47u 450
2510
1m 16
F504
F505
+9V_STBY_SW
FROM
P 3
PROTECTION
CONTROL
3507
2M2
VR25
7500
TNY256
1V3
(1V3)
410V
(314V)
I508
I510
ENABLE
DRAIN
SOURCE2
SOURCE3
SOURCE1
SOURCE4
BYPASS
SOURCE5
2504
1n 50
2513
100n 25
I509
6V11
(6V2)
6501
BZT03-C
I511
6502
BZT03-C
+3V3_STBY_SW
F509
0306
VPR2
NC
GND
NC
VCC
PH-B
TO
CN6
PDP
(DISPLAY)
1401
T2AL 250V
19372
F510
VCC
FROM
P 7
AUX_SUPPLY
6520
BAS316
I515
3520
10R
SWITCH
7530
STD16NE06L
I516
8V1
3V3
6530
BZX384-C18
2530
10u 100
3530
100K
2532
100u 25
TO
P 3
PROTECTION
7540
L7805
5V
I517
SWITCH
7531
STD16NE06L
2540
100u 25
2541
100u 25
6531
BZX384-C18
+5V_STBY_SW
2533
100u 25
TO
P 3
PROTECTION
P 6
LLC_SUPPLY
P 7
AUX_SUPPLY
3501
100R
I512
3502
470R
3V2
2V2
1V3
7501
TCET1102
I513
2511
100n 16
7502
TL431CZ
I514
3505
1K5
2512
100n 16
3503
4K7
3504
RES
I407 = 0V
F411 = 0V
F412 = 4V2
F500 = 380V
F502 = 8V7
F503 = 3V3
I504 = 19V
I508 = 1V3
I513 = 2V2
I514 = 2V5
I516 = 8V1
I517 = 5V
F404
F407
100V / div DC
10ms / div
100V / div DC
10ms / div
I406
F510
100 V / div DC
10ms / div
200 V / div DC
10µs / div
MEASURED DC-VOLTAGES
NORMAL . .
STANDBY ( . . .)
0203
HEATSINK
0201
MECHPART
1404
SHIELDING 3.3
1405
SHIELDING 3.3
HOT GROUND
COLD GROUND
3122 123 6004.5
CL 26532038_026.eps
040703
1 2 3 4 5 6 7 8 9 10 11 12 13 14
A B C D E F G H I

| | |
|---|---|
| 0201 | I5 |
| 0203 | I4 |
| 0306 | G10 |
| 0308 | B1 |
| 1400 | B3 |
| 1401 | H9 |
| 1402 | A4 |
| 1404 | I9 |
| 1405 | I10 |
| 1450 | B8 |
| 1460 | B10 |
| 2400 | B3 |
| 2401 | B5 |
| 2402 | B2 |
| 2403 | B1 |
| 2404 | B4 |
| 2405 | B4 |
| 2406 | B5 |
| 2407 | B5 |
| 2465 | C11 |
| 2503 | F5 |
| 2504 | G4 |
| 2505 | F5 |
| 2507 | E7 |
| 2508 | F7 |
| 2509 | F7 |
| 2510 | F7 |
| 2511 | H7 |
| 2512 | I7 |
| 2513 | G4 |
| 2530 | G11 |
| 2532 | G12 |
| 2533 | I12 |
| 2540 | H11 |
| 2541 | H11 |
| 3400 | B3 |
| 3401 | B2 |
| 3402 | B2 |
| 3403 | C2 |
| 3404 | A4 |
| 3450 | A10 |
| 3451 | A10 |
| 3452 | A11 |
| 3460 | D10 |
| 3461 | D10 |
| 3463 | D11 |
| 3465 | D12 |
| 3467 | C12 |
| 3469 | D12 |
| 3470 | D12 |
| 3501 | H7 |
| 3502 | H7 |
| 3503 | I8 |
| 3504 | I8 |
| 3505 | H8 |
| 3506 | F4 |
| 3507 | F4 |
| 3508 | E5 |
| 3520 | G11 |
| 3530 | G12 |
| 5401 | B4 |
| 5402 | B5 |
| 5500 | F6 |
| 5505 | F9 |
| 6460 | D11 |
| 6461 | C11 |
| 6470 | D13 |
| 6471 | C13 |
| 6501 | G6 |
| 6502 | G6 |
| 6503 | E6 |
| 6504 | E7 |
| 6505 | F7 |
| 6510 | E3 |
| 6511 | E4 |
| 6512 | E5 |
| 6513 | E6 |
| 6520 | F11 |
| 6530 | G12 |
| 6531 | I12 |
| 7460 | D11 |
| 7465 | C12 |
| 7470 | D13 |
| 7500 | G5 |
| 7501 | H6 |
| 7502 | I7 |
| 7530 | G12 |
| 7531 | H12 |
| 7540 | H11 |
| F400 | C1 |
| F401 | B1 |
| F402 | B2 |
| F403 | B2 |
| F404 | B2 |
| F405 | B2 |
| F406 | B1 |
| F407 | B2 |
| F408 | B3 |
| F409 | B3 |
| F410 | B3 |
| F411 | D13 |
| F412 | E12 |
| F500 | F5 |
| F501 | F5 |
| F502 | E8 |
| F503 | F8 |
| F504 | F7 |
| F505 | F7 |
| F509 | G9 |
| F510 | H9 |
| I400 | A4 |
| I401 | A3 |
| I402 | A5 |
| I403 | B4 |
| I404 | A7 |
| I405 | B7 |
| I406 | A9 |
| I407 | B9 |
| I408 | A10 |
| I409 | A10 |
| I410 | A12 |
| I411 | C11 |
| I412 | D10 |
| I413 | C12 |
| I414 | D12 |
| I415 | D12 |
| I416 | D12 |
| I417 | C13 |
| I418 | B2 |
| I501 | E4 |
| I502 | E5 |
| I503 | E5 |
| I504 | E5 |
| I505 | E6 |
| I506 | E7 |
| I507 | F7 |
| I508 | G4 |
| I509 | G4 |
| I510 | G6 |
| I511 | G6 |
| I512 | H7 |
| I513 | H7 |
| I514 | I7 |
| I515 | G11 |
| I516 | G12 |
| I517 | H12 |
| I518 | E6 |
| I519 | F9 |

# Power Supply Panel (FM23 AC): Protections

0307 F8
0319 A15
2303 F4
2304 D1
2305 C1
2306 D3
2316 F3
2322 D4
2324 D6
2343 E8
2350 D9
2352 D9
2364 D11
2366 E15
2370 C13
2376 G2
2380 F4
2381 H1
2385 H4
2393 H11
2396 F3
3300 B1
3301 C1
3302 F3
3303 F3
3304 D1
3305 F3
3306 D1
3307 E1
3308 C2
3309 B3
3310 B3
3311 B3
3312 C3
3313 D3
3316 F2
3317 E3
3318 B4
3319 B4
3320 B4
3321 C4
3322 D4
3323 E4
3324 D1
3325 G12
3326 G12
3327 G13
3328 G13
3330 B5
3331 B5
3332 B6
3333 C6
3334 D6
3335 E6
3338 B7
3339 B7
3340 C7
3341 C7
3342 D7
3343 E7
3344 D8
3345 C8
3346 C8
3347 D8
3348 D8
3349 C9
3350 D9
3351 D9
3352 D9
3353 D10
3354 D9
3358 C11
3359 C11
3360 D10
3361 C10
3362 D10
3363 D10
3364 D11
3365 D12
3366 D12
3367 D12
3368 D13
3369 D13
3370 B13
3371 B13
3372 B13
3373 F1
3374 F2
3376 G2
3377 G1
3378 E13
3380 H2
3381 H2
3382 F4
3385 H4
3386 G6
3387 G6
3388 F8
3389 F9
3390 G10
3391 G10
3392 F11
3393 H10
3394 F11
3395 F10
3396 F2
3397 F2
3800 E3
3801 F3
3802 F3
3803 E4
3804 F4
3805 F4
4300 F7
6312 C2
6313 D2
6314 E2
6321 C4
6322 D4
6324 E4
6325 G12
6333 C5
6334 D5
6335 E5
6340 C7
6341 D7
6342 E7
6344 D8
6347 C8
6348 D8
6362 D10
6364 D11
6365 E12
6375 F1
6376 G1
6378 F14
6390 G10
7304 E1
7308-A D2
7308-B C2
7308-C D4
7308-D C4
7326 G13
7327 G14
7330-A D5
7330-B C5
7330-C D6
7330-D C6
7341 D8
7348 D8
7351 D10
7352 D9
7362 D11
7366-A D12
7366-B G5
7366-C E14
7366-D G4
7370 A13
7375 F2
7376 H1
7389 F9
7391 G11
7393 G11
F300 A14
F301 A14
F302 A14
F303 B14
F304 B14
F305 B14
F306 B14
F307 B14
F308 B14
F309 B14
F310 C14
F311 C14
F312 C14
F313 F7
F314 F7
F315 F7
F316 F7
F317 G7
F318 G7
F319 H7
F320 H7
F321 G7
F322 E9
F323 D13
F324 F7
F343 D7
F368 C3
I301 B1
I302 C1
I303 F1
I304 D1
I305 F1
I306 E1
I307 E1
I308 F2
I309 F2
I310 G1
I311 G2
I312 D2
I314 D3
I316 D3
I318 C4
I322 D4
I324 D4
I325 G12
I326 G13
I327 G13
I330 D4
I331 C5
I332 C6
I334 D5
I335 D6
I338 C7
I339 E11
I341 D7
I342 D7
I344 D8
I345 D7
I347 D8
I348 D8
I349 C9
I350 D9
I351 D9
I352 D10
I362 D11
I363 C11
I364 D11
I365 D12
I366 D13
I367 D11
I370 B10
I371 B10
I372 B10
I373 B10
I374 B10
I375 B10
I376 B10
I377 B13
I378 B13
I379 E14
I384 G4
I385 G4
I386 G5
I387 G5
I388 F3
I389 F9
I390 G10
I391 G10
I392 F10
I396 G10
I900 E6
I901 F6
I902 F6
I903 F6
I904 G6
I905 G6
I906 G6
I907 B10
I908 B10
I909 B10
I910 B10
I911 B10
I912 B10
I913 C11
I914 C3
I915 C4
I916 C5
I917 C7
I918 D8
I919 D11
I920 D12
I921 A15
I922 A15
I923 A15
I924 B15
I925 B15
I926 B15
I927 C15
I928 B15
I929 B15
I930 B15
I931 B15
I932 C15
I933 C15
I934 F6
I935 B10

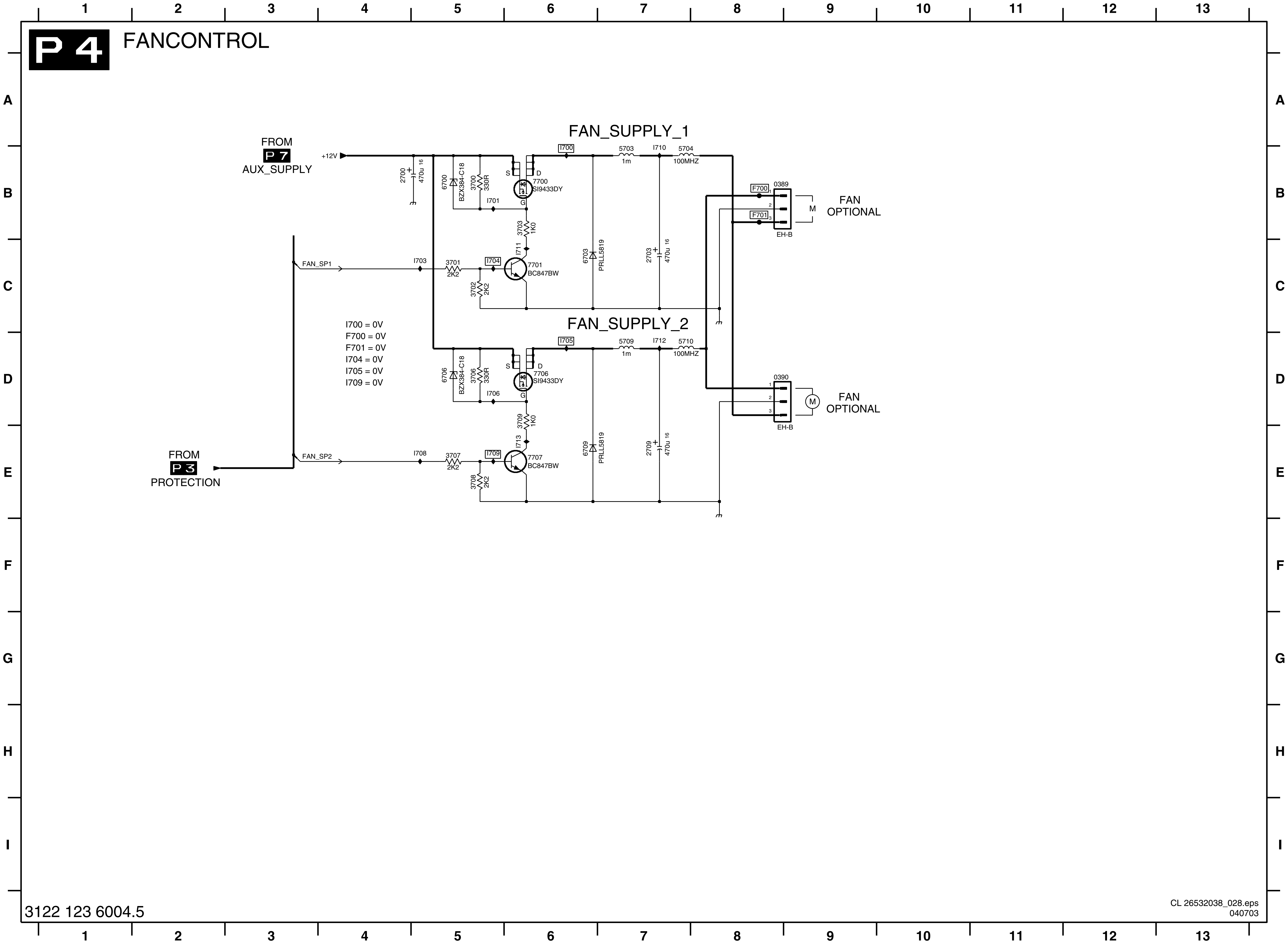

P3
PROTECTION
FROM P2 +5V_STBY_SW
FROM P6 LLC_SUPPLY Vs_unsw 70-90V
2.5 Vref
VS PROTECTION
VA PROTECTION
VCC PROTECTION
+3V3 PROTECTION
FROM P7
LATCH
VCEGO
DCPROT
TEMP
ERROR LOGGING
7370 PCF8574AT
LP FILTER
INTERRUPT LOGIC
I/O PORTS
SHIFT REGISTER
BUS CONTROL
INPUT FILTER
POWER-ON RESET
TO P6 LLC_SUPPLY
TO P7 AUX_SUPPLY
TO P2 FILTER_STBY
TO 0319 5C8 CONTROL
TO P4 FANCONTROL
VSA CONTROL
FROM P6 P7
VSK S_GND VAK IAK VRS VRA VCEGO VSAGO
TO CN7 PDP (DISPLAY)
IAK BUFFER
TO P7 PROTECTION
STANDBY
8V6 UNDER VOLTAGE PROTECTION
TO P2 FILTER_STBY
TO P7 AUX_SUPPLY
TO P6 LLC_SUPPLY
TL431CZ 7304
LM339D
LM324D
BC847BW
BC857BW

I305 = 0V
I312 = 4V9
I318 = 5V
I331 = 5V
I338 = 5V
I362 = 5V
I363 =4V9
I365 = 4V8
I370 = 4V9
I371 = 5V
I372 = 5V
I373 = 5V
I374 = 5V
I375 = 4V
I376 = 5V
F300 = 9V
F301 = 9V
F302 = 8V6
F304 = 5V
F305 = 3V3
F309 = 3V3
F310 = 0V4
F313 = 2V3
F314 = 2V
F315 = 0V1
F316 = 0V8
F317 = 1V3
F318 = 3V2
F319 = 3V3
F343 = 0V

3122 123 6004.5

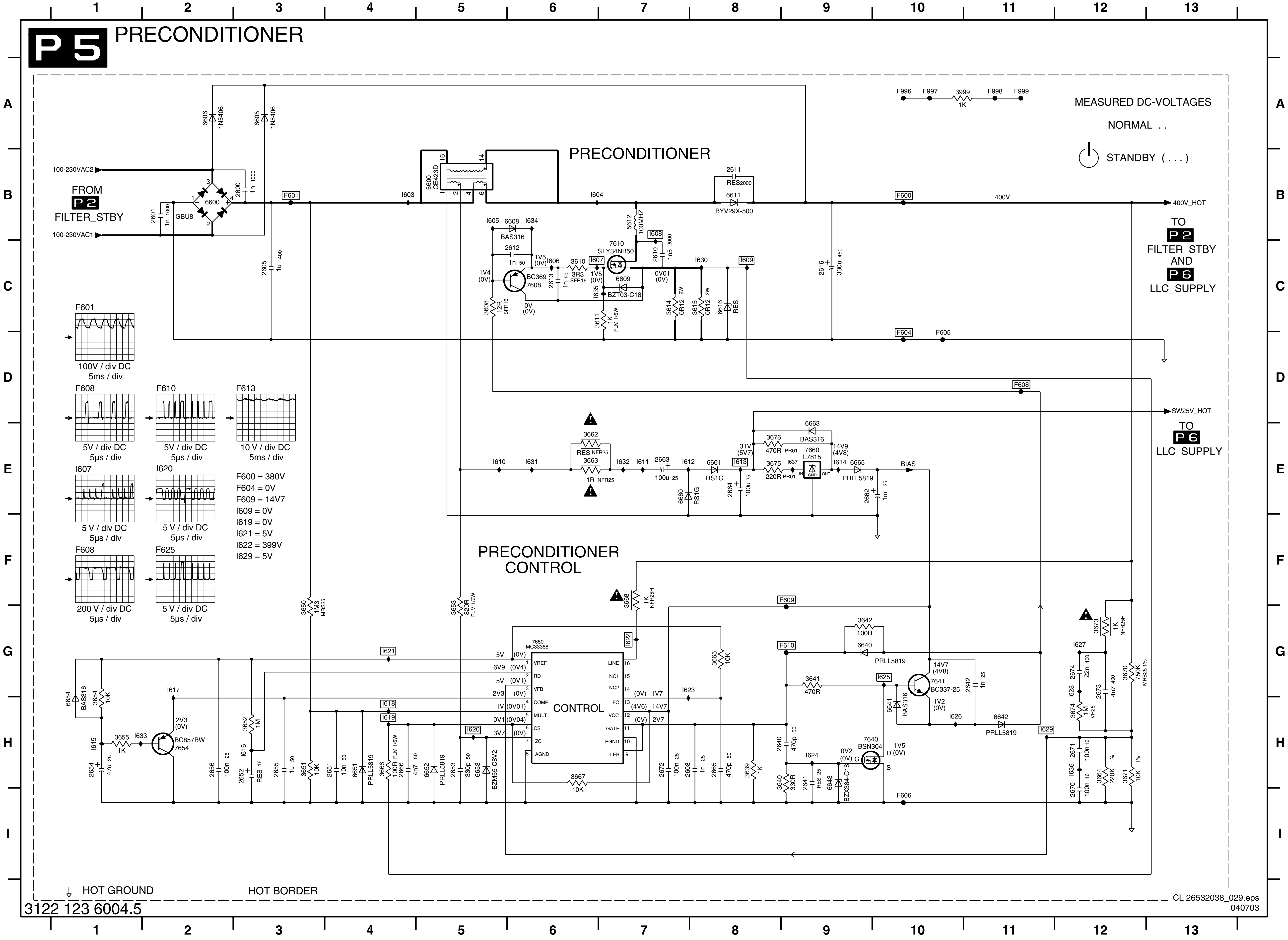
CL 26532038_027.eps
040703

## Power Supply Panel (FM23 AC): Fan Control


P 4
FANCONTROL
FROM
P 7
AUX_SUPPLY
+12V
2700
470u 16
6700
BZX384-C18
3700
330R
I701
S
D
G
7700
SI9433DY
3703
1K0
FAN_SUPPLY_1
I700
5703
1m
I710
5704
100MHZ
6703
PRLL5819
2703
470u 16
F700
F701
0389
1
2
3
M
EH-B
FAN
OPTIONAL
FAN_SP1
I703
3701
2K2
I704
I711
7701
BC847BW
3702
2K2
I700 = 0V
F700 = 0V
F701 = 0V
I704 = 0V
I705 = 0V
I709 = 0V
FAN_SUPPLY_2
I705
5709
1m
I712
5710
100MHZ
6706
BZX384-C18
3706
330R
I706
7706
SI9433DY
3709
1K0
0390
1
2
3
M
EH-B
FAN
OPTIONAL
FROM
P 3
PROTECTION
FAN_SP2
I708
3707
2K2
I709
I713
7707
BC847BW
3708
2K2
6709
PRLL5819
2709
470u 16
1
2
3
4
5
6
7
8
9
10
11
12
13
A
B
C
D
E
F
G
H
I
3122 123 6004.5
CL 26532038_028.eps
040703

| | |
|---|---|
| 0389 | B8 |
| 0390 | D8 |
| 2700 | B4 |
| 2703 | C7 |
| 2709 | E7 |
| 3700 | B5 |
| 3701 | C5 |
| 3702 | C5 |
| 3703 | B6 |
| 3706 | D5 |
| 3707 | E5 |
| 3708 | E5 |
| 3709 | D6 |
| 5703 | B7 |
| 5704 | B7 |
| 5709 | D7 |
| 5710 | D7 |
| 6700 | B5 |
| 6703 | C6 |
| 6706 | D5 |
| 6709 | E6 |
| 7700 | B6 |
| 7701 | C6 |
| 7706 | D6 |
| 7707 | E6 |
| F700 | B8 |
| F701 | B8 |
| I700 | B6 |
| I701 | B5 |
| I703 | C5 |
| I704 | C5 |
| I705 | D6 |
| I706 | D5 |
| I708 | E5 |
| I709 | E5 |
| I710 | B7 |
| I711 | C6 |
| I712 | D7 |
| I713 | E6 |

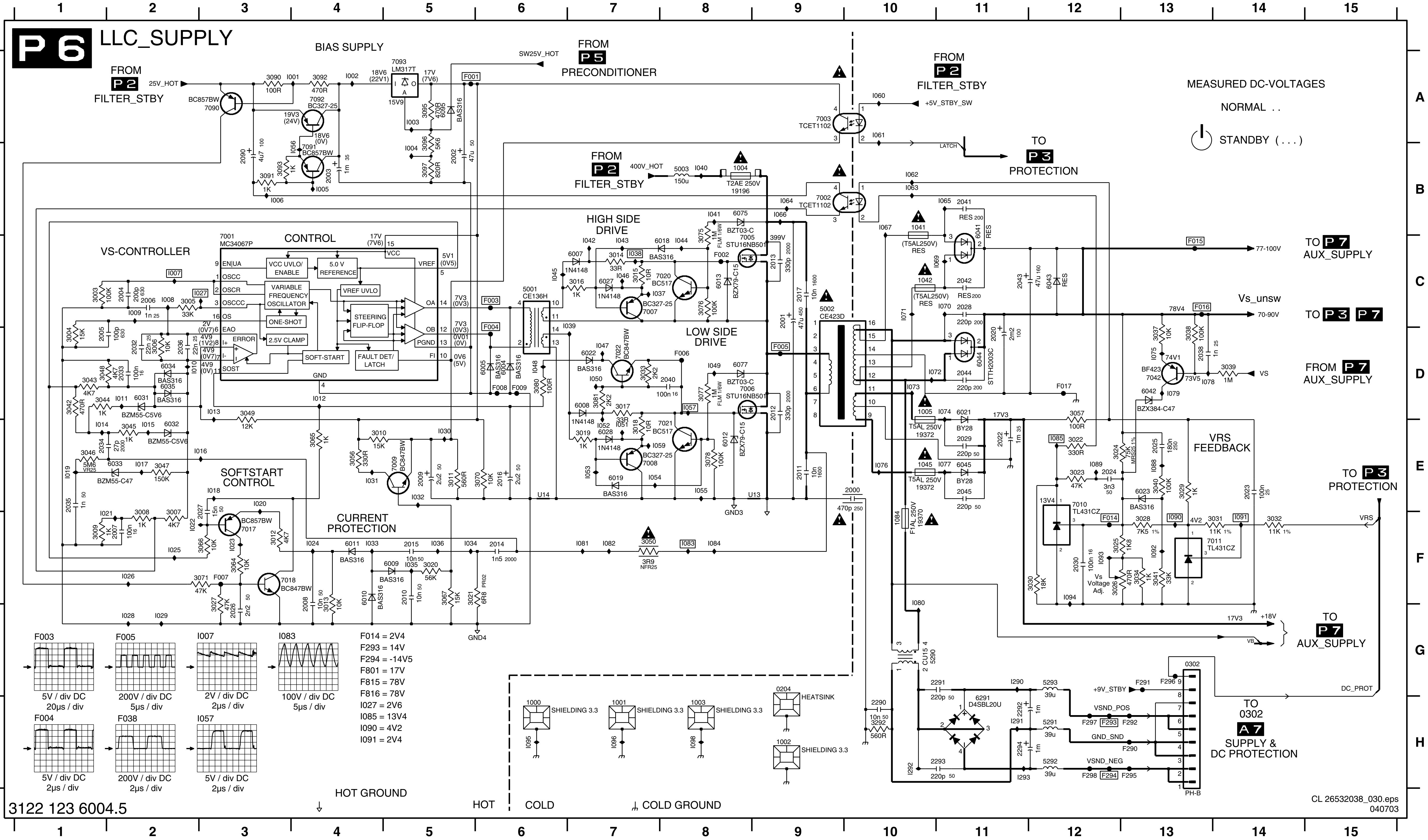
## Power Supply Panel (FM23 AC): Pre-Conditioner


P5
PRECONDITIONER
1 2 3 4 5 6 7 8 9 10 11 12 13
A B C D E F G H I
PRECONDITIONER
PRECONDITIONER CONTROL
MEASURED DC-VOLTAGES
NORMAL ..
STANDBY (...)
FROM P2 FILTER_STBY
100-230VAC2
100-230VAC1
TO P2 FILTER_STBY AND P6 LLC_SUPPLY
400V_HOT
SW25V_HOT
TO P6 LLC_SUPPLY
BIAS
400V
6600 GBU8
6605 1N5406
6606 1N5406
5600 CE423D
5612 100MHZ
7610 STY34NB50
7608 BC369
6608 BAS316
6609 BZT03-C18
6611 BYV29X-500
2616 330u 450
7650 MC33368
CONTROL
VREF RD VFB COMP MULT CS ZC AGND
LINE NC1 NC2 FC VCC GATE PGND LEB
7654 BC857BW
7640 BSN304
7641 BC337-25
7660 L7815
6663 BAS316
6665 PRLL5819
6640 PRLL5819
6642 PRLL5819
6641 BAS316
6653 BZM55-C8V2
6643 BZX384-C18
F601
100V / div DC 5ms / div
F608
5V / div DC 5µs / div
F610
5V / div DC 5µs / div
F613
10 V / div DC 5ms / div
I607
5 V / div DC 5µs / div
I620
5 V / div DC 5µs / div
F608
200 V / div DC 5µs / div
F625
5 V / div DC 5µs / div
F600 = 380V
F604 = 0V
F609 = 14V7
I609 = 0V
I619 = 0V
I621 = 5V
I622 = 399V
I629 = 5V
HOT GROUND
HOT BORDER
3122 123 6004.5
CL 26532038_029.eps
040703

| | |
|---|---|
| 2600 | B3 |
| 2601 | B2 |
| 2605 | C3 |
| 2608 | H8 |
| 2610 | C7 |
| 2611 | B8 |
| 2612 | C6 |
| 2613 | C6 |
| 2616 | C9 |
| 2640 | H9 |
| 2641 | H9 |
| 2642 | G11 |
| 2651 | H4 |
| 2652 | H3 |
| 2653 | H5 |
| 2654 | H1 |
| 2655 | H3 |
| 2656 | H2 |
| 2662 | E9 |
| 2663 | E7 |
| 2664 | E8 |
| 2665 | H8 |
| 2666 | H4 |
| 2670 | I12 |
| 2671 | H12 |
| 2672 | H7 |
| 2673 | G12 |
| 2674 | G12 |
| 3608 | C5 |
| 3610 | C6 |
| 3611 | C7 |
| 3614 | C7 |
| 3615 | C8 |
| 3639 | H8 |
| 3640 | H9 |
| 3641 | G9 |
| 3642 | G9 |
| 3650 | G3 |
| 3651 | H3 |
| 3652 | H3 |
| 3653 | G5 |
| 3654 | H1 |
| 3655 | H1 |
| 3662 | E6 |
| 3663 | E6 |
| 3664 | H12 |
| 3665 | G8 |
| 3666 | H4 |
| 3667 | H6 |
| 3668 | F7 |
| 3670 | G12 |
| 3671 | H12 |
| 3673 | G12 |
| 3674 | H12 |
| 3675 | E8 |
| 3676 | E8 |
| 3999 | A10 |
| 5600 | B5 |
| 5612 | B7 |
| 6600 | B2 |
| 6605 | A3 |
| 6606 | A2 |
| 6608 | B6 |
| 6609 | C7 |
| 6611 | B8 |
| 6616 | C8 |
| 6640 | G9 |
| 6641 | H10 |
| 6642 | H11 |
| 6643 | H9 |
| 6651 | H4 |
| 6652 | H5 |
| 6653 | H5 |
| 6654 | H1 |
| 6660 | E7 |
| 6661 | E8 |
| 6663 | E9 |
| 6665 | E9 |
| 7608 | C6 |
| 7610 | C7 |
| 7640 | H9 |
| 7641 | G10 |
| 7650 | G6 |
| 7654 | H2 |
| 7660 | E9 |
| F600 | B10 |
| F601 | B3 |
| F604 | D10 |
| F605 | D10 |
| F606 | I10 |
| F608 | D11 |
| F609 | F9 |
| F610 | G9 |
| F996 | A10 |
| F997 | A10 |
| F998 | A11 |
| F999 | A11 |
| I603 | B4 |
| I604 | B6 |
| I605 | B5 |
| I606 | C6 |
| I607 | C6 |
| I608 | B7 |
| I609 | C8 |
| I610 | E5 |
| I611 | E7 |
| I612 | E7 |
| I613 | E8 |
| I614 | E9 |
| I615 | H1 |
| I616 | H3 |
| I617 | G2 |
| I618 | H4 |
| I619 | H4 |
| I620 | H5 |
| I621 | G4 |
| I622 | G7 |
| I623 | G7 |
| I624 | H9 |
| I625 | G10 |
| I626 | H10 |
| I627 | G12 |
| I628 | G12 |
| I629 | H11 |
| I630 | C8 |
| I631 | E6 |
| I632 | E7 |
| I633 | H1 |
| I634 | B6 |
| I635 | C6 |
| I636 | H12 |
| I637 | E9 |

# Power Supply Panel (FM23 AC): LLC Supply

| | |
|---|---|
| U13 | E9 |
| U14 | E6 |
| 0204 | G9 |
| 0302 | G13 |
| 1000 | H6 |
| 1001 | H7 |
| 1002 | H9 |
| 1003 | H8 |
| 1004 | B8 |
| 1005 | D10 |
| 1041 | B10 |
| 1042 | C10 |
| 1045 | E10 |
| 1084 | F10 |
| 2000 | E10 |
| 2001 | C9 |
| 2002 | B5 |
| 2003 | B4 |
| 2004 | C2 |
| 2005 | D1 |
| 2006 | C2 |
| 2007 | F2 |
| 2008 | G4 |
| 2009 | E5 |
| 2010 | F5 |
| 2011 | E9 |
| 2012 | D9 |
| 2013 | C9 |
| 2014 | F6 |
| 2015 | F5 |
| 2016 | E6 |
| 2017 | C9 |
| 2020 | D11 |
| 2022 | E11 |
| 2023 | E14 |
| 2024 | E12 |
| 2025 | E13 |
| 2026 | G3 |
| 2027 | F3 |
| 2028 | C11 |
| 2029 | E11 |
| 2030 | F12 |
| 2032 | D2 |
| 2033 | D2 |
| 2034 | E1 |
| 2035 | E1 |
| 2036 | D2 |
| 2038 | D13 |
| 2040 | D8 |
| 2041 | B11 |
| 2042 | C11 |
| 2043 | C11 |
| 2044 | D11 |
| 2045 | E11 |
| 2090 | B3 |
| 2290 | H10 |
| 2291 | G11 |
| 2292 | H11 |
| 2293 | H11 |
| 2294 | H11 |
| 3003 | C1 |
| 3004 | D1 |
| 3005 | C2 |
| 3006 | D2 |
| 3007 | F2 |
| 3008 | F2 |
| 3009 | F1 |
| 3010 | E4 |
| 3011 | E5 |
| 3012 | F3 |
| 3013 | G4 |
| 3014 | C7 |
| 3015 | C7 |
| 3016 | C7 |
| 3017 | D7 |
| 3018 | E7 |
| 3019 | E7 |
| 3020 | F5 |
| 3021 | F5 |
| 3022 | E12 |
| 3023 | E12 |
| 3024 | E12 |
| 3025 | F12 |
| 3026 | F12 |
| 3027 | G3 |
| 3028 | F13 |
| 3029 | E13 |
| 3030 | F12 |
| 3031 | F14 |
| 3032 | F14 |
| 3033 | D7 |
| 3034 | F13 |
| 3037 | D13 |
| 3038 | D13 |
| 3039 | D14 |
| 3040 | E13 |
| 3041 | F13 |
| 3042 | D1 |
| 3043 | D1 |
| 3044 | D1 |
| 3045 | E2 |
| 3046 | E1 |
| 3047 | E2 |
| 3048 | D1 |
| 3049 | D3 |
| 3050 | F7 |
| 3056 | E4 |
| 3057 | D12 |
| 3064 | F3 |
| 3065 | E4 |
| 3066 | F3 |
| 3067 | F5 |
| 3070 | E6 |
| 3071 | F3 |
| 3075 | C8 |
| 3076 | C8 |
| 3077 | D8 |
| 3078 | E8 |
| 3080 | D6 |
| 3081 | D7 |
| 3090 | A3 |
| 3091 | B3 |
| 3092 | A4 |
| 3093 | B3 |
| 3095 | A5 |
| 3096 | B5 |
| 3097 | B5 |
| 3292 | H10 |
| 5001 | C6 |
| 5002 | C9 |
| 5003 | B8 |
| 5290 | G10 |
| 5291 | H12 |
| 5292 | H12 |
| 5293 | G12 |
| 6004 | D6 |
| 6005 | D6 |
| 6007 | C7 |
| 6008 | D7 |
| 6009 | F5 |
| 6010 | F4 |
| 6011 | F4 |
| 6012 | E8 |
| 6013 | C8 |
| 6018 | C8 |
| 6019 | E7 |
| 6021 | D11 |
| 6022 | D7 |
| 6023 | E13 |
| 6027 | C7 |
| 6028 | E7 |
| 6031 | D2 |
| 6032 | E2 |
| 6033 | E2 |
| 6034 | D2 |
| 6035 | D2 |
| 6041 | C11 |
| 6042 | D13 |
| 6043 | C12 |
| 6044 | D11 |
| 6045 | E11 |
| 6075 | B8 |
| 6077 | D8 |
| 6095 | A5 |
| 6291 | H11 |
| 7001 | C3 |
| 7002 | B9 |
| 7003 | A9 |
| 7005 | C8 |
| 7006 | D8 |
| 7007 | C7 |
| 7008 | E7 |
| 7009 | E5 |
| 7010 | E12 |
| 7011 | F13 |
| 7017 | F3 |
| 7018 | F3 |
| 7020 | C8 |
| 7021 | E8 |
| 7022 | D7 |
| 7042 | D13 |
| 7090 | A3 |
| 7091 | B4 |
| 7092 | A4 |
| 7093 | A5 |
| F001 | A5 |
| F002 | C8 |
| F003 | C6 |
| F004 | D6 |
| F005 | D9 |
| F006 | D8 |
| F007 | F3 |
| F008 | D6 |
| F009 | D6 |
| F014 | F12 |
| F015 | C13 |
| F016 | C13 |
| F017 | D12 |
| F290 | H13 |
| F291 | G13 |
| F292 | H13 |
| F293 | H12 |
| F294 | H12 |
| F295 | H13 |
| F296 | G13 |
| F297 | H12 |
| F298 | H12 |
| I001 | A4 |
| I002 | A4 |
| I003 | A5 |
| I004 | B5 |
| I005 | B4 |
| I006 | B3 |
| I007 | C2 |
| I008 | C2 |
| I009 | C2 |
| I010 | D2 |
| I011 | D2 |
| I012 | D4 |
| I013 | D3 |
| I014 | E1 |
| I015 | E2 |
| I016 | E3 |
| I017 | E2 |
| I018 | E3 |
| I019 | E1 |
| I020 | E3 |
| I021 | F1 |
| I022 | F2 |
| I023 | F3 |
| I024 | F4 |
| I025 | F2 |
| I026 | F2 |
| I027 | C3 |
| I028 | G2 |
| I029 | G2 |
| I030 | E5 |
| I031 | E4 |
| I032 | E5 |
| I033 | F4 |
| I034 | F5 |
| I035 | F5 |
| I036 | F5 |
| I037 | C7 |
| I038 | C7 |
| I039 | C7 |
| I040 | B8 |
| I041 | B8 |
| I042 | C7 |
| I043 | C7 |
| I044 | C8 |
| I045 | C6 |
| I046 | C7 |
| I047 | D7 |
| I048 | D6 |
| I049 | D8 |
| I050 | D7 |
| I051 | E7 |
| I052 | E7 |
| I053 | E7 |
| I054 | E7 |
| I055 | E8 |
| I056 | B4 |
| I057 | D8 |
| I059 | E7 |
| I060 | A10 |
| I061 | A10 |
| I062 | B10 |
| I063 | B10 |
| I064 | B9 |
| I065 | B11 |
| I066 | B9 |
| I067 | B10 |
| I069 | C11 |
| I070 | C11 |
| I071 | C10 |
| I072 | D10 |
| I073 | D10 |
| I074 | D11 |
| I075 | D13 |
| I076 | E10 |
| I077 | E11 |
| I078 | D13 |
| I079 | D13 |
| I080 | F10 |
| I081 | F7 |
| I082 | F7 |
| I083 | F8 |
| I084 | F8 |
| I085 | E12 |
| I088 | E13 |
| I089 | E12 |
| I090 | F13 |
| I091 | F14 |
| I092 | F13 |
| I093 | F12 |
| I094 | F12 |
| I095 | H6 |
| I096 | H7 |
| I098 | H8 |
| I290 | G11 |
| I291 | H11 |
| I292 | H10 |
| I293 | H11 |


P6 LLC_SUPPLY
BIAS SUPPLY
FROM P2 FILTER_STBY
25V_HOT
FROM P5 PRECONDITIONER
SW25V_HOT
FROM P2 FILTER_STBY
400V_HOT
FROM P2 FILTER_STBY
+5V_STBY_SW
LATCH
TO P3 PROTECTION
MEASURED DC-VOLTAGES
NORMAL . .
STANDBY ( . . . )
VS-CONTROLLER
CONTROL
7001 MC34067P
VCC UVLO/ ENABLE
5.0 V REFERENCE
VARIABLE FREQUENCY OSCILLATOR
VREF UVLO
ONE-SHOT
STEERING FLIP-FLOP
ERROR
2.5V CLAMP
SOFT-START
FAULT DET/ LATCH
HIGH SIDE DRIVE
LOW SIDE DRIVE
SOFTSTART CONTROL
CURRENT PROTECTION
TO P7 AUX_SUPPLY
77-100V
Vs_unsw
70-90V
TO P3 P7
FROM P7 AUX_SUPPLY
VS
VRS FEEDBACK
TO P3 PROTECTION
VRS
+18V
17V3
TO P7 AUX_SUPPLY
DC_PROT
TO 0302 A7 SUPPLY & DC PROTECTION
+9V_STBY
VSND_POS
GND_SND
VSND_NEG
SHIELDING 3.3
HEATSINK
HOT GROUND
HOT
COLD
COLD GROUND
F003
F005
I007
I083
5V / div DC 20µs / div
200V / div DC 5µs / div
2V / div DC 2µs / div
100V / div DC 5µs / div
F004
F038
I057
5V / div DC 2µs / div
200V / div DC 2µs / div
5V / div DC 2µs / div
F014 = 2V4
F293 = 14V
F294 = -14V5
F801 = 17V
F815 = 78V
F816 = 78V
I027 = 2V6
I085 = 13V4
I090 = 4V2
I091 = 2V4
3122 123 6004.5
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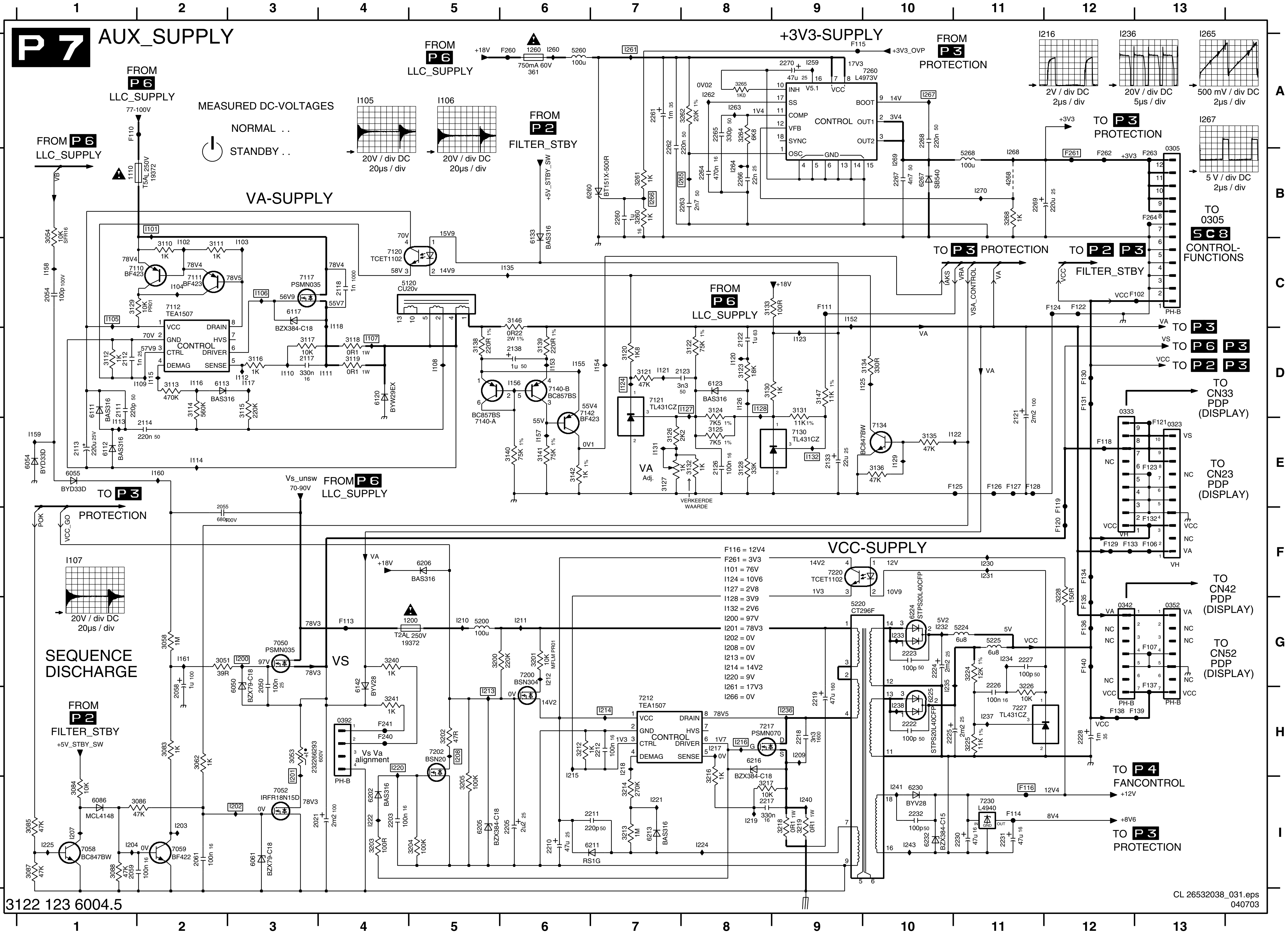
## Power Supply Panel (FM23 AC): Aux Supply


P 7 AUX_SUPPLY
FROM P 6 LLC_SUPPLY
MEASURED DC-VOLTAGES
NORMAL ..
STANDBY ..
VA-SUPPLY
FROM P 2 FILTER_STBY
+3V3-SUPPLY
FROM P 3 PROTECTION
TO P 3 PROTECTION
TO P 2 P 3 FILTER_STBY
TO 0305 S C 8 CONTROL-FUNCTIONS
TO P 3
TO P 6 P 3
TO P 2 P 3
TO CN33 PDP (DISPLAY)
TO CN23 PDP (DISPLAY)
TO CN42 PDP (DISPLAY)
TO CN52 PDP (DISPLAY)
TO P 4 FANCONTROL
SEQUENCE DISCHARGE
VCC-SUPPLY
VS
Vs Va alignment
VERKEERDE WAARDE
I105 20V / div DC 20µs / div
I106 20V / div DC 20µs / div
I107 20V / div DC 20µs / div
I216 2V / div DC 2µs / div
I236 20V / div DC 5µs / div
I265 500 mV / div DC 2µs / div
I267 5 V / div DC 2µs / div
7112 TEA1507
7212 TEA1507
7260 L4973V
7120 TCET1102
7220 TCET1102
F116 = 12V4
F261 = 3V3
I101 = 76V
I124 = 10V6
I127 = 2V8
I128 = 3V9
I132 = 2V6
I200 = 97V
I201 = 78V3
I202 = 0V
I208 = 0V
I213 = 0V
I214 = 14V2
I220 = 9V
I261 = 17V3
I266 = 0V
1 2 3 4 5 6 7 8 9 10 11 12 13
A B C D E F G H I

3122 123 6004.5

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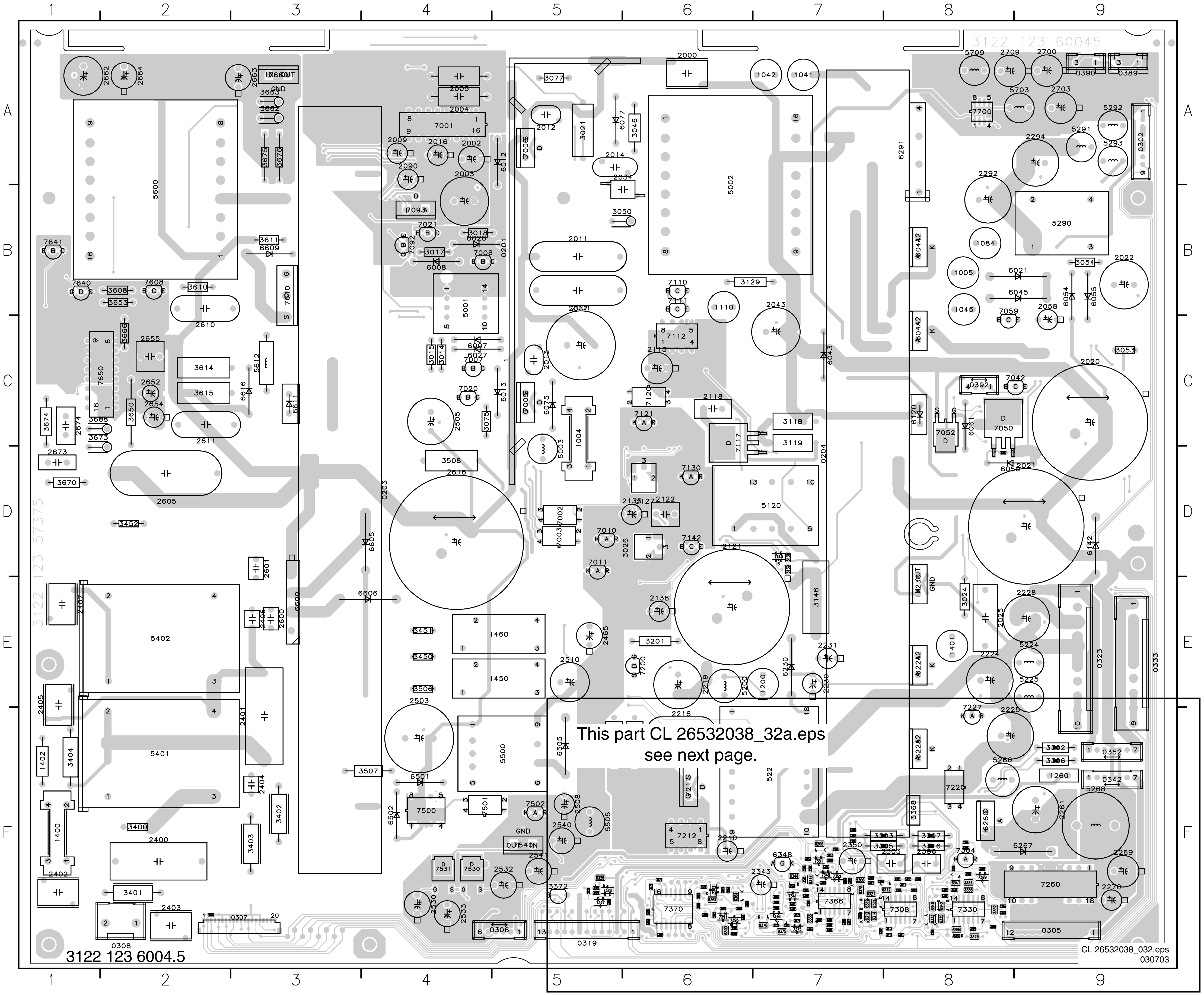
| | |
|---|---|
| 0305 | A13 |
| 0323 | E13 |
| 0333 | D12 |
| 0342 | G12 |
| 0352 | G13 |
| 0392 | H4 |
| 1110 | B1 |
| 1200 | G5 |
| 1260 | A6 |
| 2021 | I3 |
| 2050 | G3 |
| 2054 | C1 |
| 2055 | F2 |
| 2058 | H2 |
| 2059 | I1 |
| 2061 | I2 |
| 2111 | D1 |
| 2112 | D1 |
| 2113 | E1 |
| 2114 | E2 |
| 2117 | D3 |
| 2118 | C4 |
| 2121 | D11 |
| 2122 | D8 |
| 2123 | D8 |
| 2126 | E8 |
| 2133 | E9 |
| 2138 | D6 |
| 2203 | I4 |
| 2205 | I6 |
| 2210 | I6 |
| 2211 | I7 |
| 2212 | H7 |
| 2217 | I8 |
| 2218 | H9 |
| 2219 | H9 |
| 2222 | H10 |
| 2223 | G10 |
| 2224 | G10 |
| 2225 | H10 |
| 2226 | H11 |
| 2227 | G11 |
| 2228 | H12 |
| 2230 | I11 |
| 2231 | I11 |
| 2232 | I10 |
| 2260 | B7 |
| 2261 | A7 |
| 2262 | A7 |
| 2263 | B8 |
| 2264 | B8 |
| 2265 | A8 |
| 2266 | B8 |
| 2267 | B10 |
| 2268 | A10 |
| 2269 | B11 |
| 2270 | A9 |
| 3051 | G2 |
| 3053 | H3 |
| 3054 | B1 |
| 3058 | G2 |
| 3062 | H2 |
| 3083 | H2 |
| 3084 | I1 |
| 3085 | I1 |
| 3086 | I2 |
| 3087 | I1 |
| 3088 | I1 |
| 3110 | C2 |
| 3111 | C2 |
| 3112 | D1 |
| 3113 | D2 |
| 3114 | D2 |
| 3115 | D3 |
| 3116 | D3 |
| 3117 | D3 |
| 3118 | D4 |
| 3119 | D4 |
| 3120 | D7 |
| 3121 | D7 |
| 3122 | D8 |
| 3123 | D8 |
| 3124 | D8 |
| 3125 | E8 |
| 3126 | E7 |
| 3127 | E7 |
| 3128 | E8 |
| 3129 | C1 |
| 3130 | D8 |
| 3131 | D9 |
| 3132 | E8 |
| 3133 | C8 |
| 3134 | D10 |
| 3135 | E10 |
| 3136 | E10 |
| 3138 | D5 |
| 3139 | D6 |
| 3140 | E6 |
| 3141 | E6 |
| 3142 | E6 |
| 3146 | C6 |
| 3147 | D9 |
| 3200 | G5 |
| 3201 | G6 |
| 3202 | H5 |
| 3203 | I4 |
| 3204 | I5 |
| 3205 | I5 |
| 3212 | H6 |
| 3213 | I7 |
| 3214 | I7 |
| 3216 | H8 |
| 3217 | I8 |
| 3218 | I9 |
| 3219 | I9 |
| 3224 | G11 |
| 3225 | H11 |
| 3226 | H11 |
| 3228 | F12 |
| 3240 | G4 |
| 3241 | H4 |
| 3260 | B7 |
| 3261 | B7 |
| 3262 | A8 |
| 3264 | A8 |
| 3265 | A8 |
| 3268 | B11 |
| 4268 | B11 |
| 5120 | C5 |
| 5200 | G5 |
| 5220 | G9 |
| 5224 | G11 |
| 5225 | G11 |
| 5260 | A6 |
| 5268 | B11 |
| 6050 | G3 |
| 6054 | E1 |
| 6055 | E1 |
| 6061 | I3 |
| 6086 | I1 |
| 6111 | D1 |
| 6112 | E1 |
| 6113 | D2 |
| 6117 | C3 |
| 6120 | D4 |
| 6123 | D8 |
| 6133 | B6 |
| 6142 | G4 |
| 6202 | I4 |
| 6205 | I5 |
| 6206 | F5 |
| 6211 | I7 |
| 6213 | I7 |
| 6216 | H8 |
| 6224 | G10 |
| 6225 | H10 |
| 6230 | I10 |
| 6232 | I10 |
| 6260 | B7 |
| 6267 | B10 |
| 7050 | G3 |
| 7052 | I3 |
| 7058 | I1 |
| 7059 | I2 |
| 7110 | C2 |
| 7111 | C2 |
| 7112 | C2 |
| 7117 | C3 |
| 7120 | C4 |
| 7121 | D7 |
| 7130 | E9 |
| 7134 | E10 |
| 7140-A | E5 |
| 7140-B | D6 |
| 7142 | D6 |
| 7200 | G6 |
| 7202 | H5 |
| 7212 | H7 |
| 7217 | H8 |
| 7220 | F9 |
| 7227 | H11 |
| 7230 | I11 |
| 7260 | A10 |
| F102 | C13 |
| F106 | F13 |
| F107 | G13 |
| F110 | A1 |
| F111 | C9 |
| F113 | G4 |
| F114 | I11 |
| F115 | A9 |
| F116 | I11 |
| F118 | E12 |
| F119 | E12 |
| F120 | F12 |
| F121 | E13 |
| F122 | C12 |
| F123 | E13 |
| F124 | C12 |
| F125 | E11 |
| F126 | E11 |
| F127 | E11 |
| F128 | E11 |
| F129 | F12 |
| F130 | D12 |
| F131 | D12 |
| F132 | F13 |
| F133 | F12 |
| F134 | F12 |
| F135 | G12 |
| F136 | G12 |
| F137 | H13 |
| F138 | H12 |
| F139 | H13 |
| F140 | G12 |
| F240 | H4 |
| F241 | H4 |
| F260 | A6 |
| F261 | B12 |
| F262 | B12 |
| F263 | B13 |
| F264 | B13 |
| I101 | B2 |
| I102 | C2 |
| I103 | C3 |
| I104 | C2 |
| I105 | C1 |
| I106 | C3 |
| I107 | D4 |
| I108 | D5 |
| I109 | D2 |
| I110 | D3 |
| I111 | D4 |
| I112 | D3 |
| I113 | E1 |
| I114 | E2 |
| I115 | D2 |
| I116 | D2 |
| I117 | D3 |
| I118 | C4 |
| I120 | D8 |
| I121 | D7 |
| I122 | E11 |
| I123 | D9 |
| I124 | D7 |
| I125 | D9 |
| I126 | D8 |
| I127 | D8 |
| I128 | D8 |
| I129 | E10 |
| I131 | E7 |
| I132 | E9 |
| I135 | C6 |
| I152 | C9 |
| I153 | D6 |
| I154 | D7 |
| I155 | D6 |
| I156 | D6 |
| I157 | E6 |
| I158 | C1 |
| I159 | E1 |
| I160 | E2 |
| I161 | G2 |
| I200 | G3 |
| I201 | H3 |
| I202 | I3 |
| I203 | I2 |
| I204 | I1 |
| I207 | I1 |
| I208 | H5 |
| I209 | H9 |
| I210 | G5 |
| I211 | G6 |
| I212 | G6 |
| I213 | H5 |
| I214 | H7 |
| I215 | H6 |
| I216 | H8 |
| I217 | H8 |
| I218 | H7 |
| I219 | I8 |
| I220 | H4 |
| I221 | I7 |
| I222 | I4 |
| I224 | I8 |
| I225 | I1 |
| I230 | F11 |
| I231 | F11 |
| I232 | G10 |
| I233 | G10 |
| I234 | G11 |
| I235 | G10 |
| I236 | H9 |
| I237 | H11 |
| I238 | H10 |
| I240 | I9 |
| I241 | I10 |
| I243 | I10 |
| I259 | A9 |
| I260 | A6 |
| I261 | A7 |
| I262 | A8 |
| I263 | A8 |
| I264 | B8 |
| I265 | B7 |
| I266 | B7 |
| I267 | A10 |
| I268 | B11 |
| I269 | B10 |
| I270 | B11 |

## Layout Power Supply Panel (FM23 AC) (Top Side)



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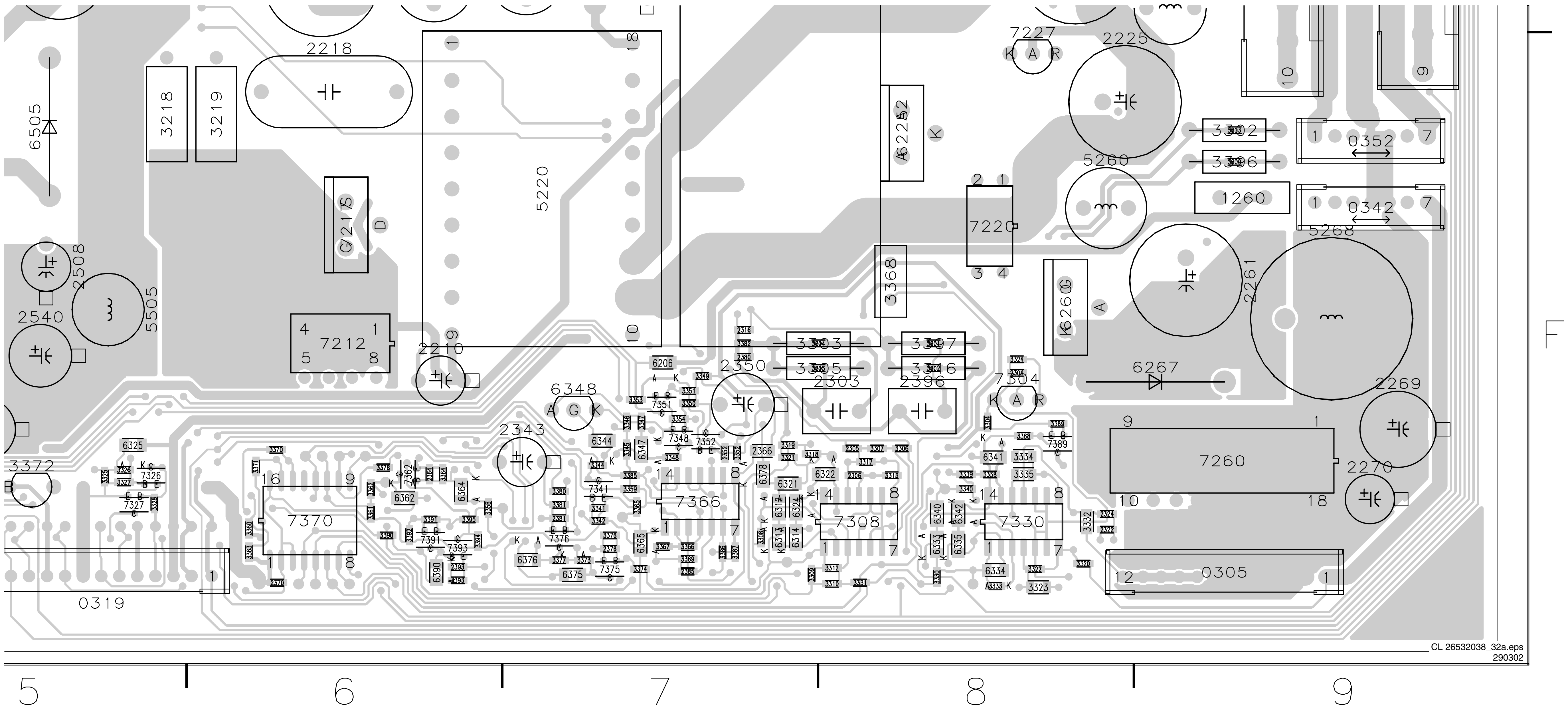
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0201 | B5 | 2402 | F1 | 3345 | F7 | 5292 | A9 | 7140 | D7 |
| 0203 | D4 | 2403 | F2 | 3346 | F7 | 5293 | A9 | 7142 | D6 |
| 0204 | D7 | 2404 | F3 | 3347 | F7 | 5401 | F2 | 7200 | E6 |
| 0302 | A9 | 2405 | E1 | 3348 | F7 | 5402 | E2 | 7212 | F6 |
| 0305 | F9 | 2406 | E3 | 3349 | F7 | 5500 | F5 | 7217 | F6 |
| 0306 | F5 | 2407 | E1 | 3350 | F7 | 5505 | F5 | 7220 | F8 |
| 0307 | F3 | 2465 | E5 | 3351 | F7 | 5600 | B2 | 7227 | F8 |
| 0308 | F2 | 2503 | E4 | 3352 | F7 | 5612 | C3 | 7230 | E8 |
| 0319 | F5 | 2505 | C4 | 3353 | F7 | 5703 | A9 | 7260 | F9 |
| 0323 | E9 | 2508 | F5 | 3354 | F7 | 5709 | A8 | 7304 | F8 |
| 0333 | E9 | 2510 | E5 | 3358 | F6 | 6007 | C4 | 7308 | F8 |
| 0342 | F9 | 2530 | F4 | 3359 | F7 | 6008 | B4 | 7326 | F5 |
| 0352 | F9 | 2532 | F5 | 3360 | F6 | 6012 | A5 | 7327 | F5 |
| 0389 | A9 | 2533 | F4 | 3361 | F6 | 6013 | C5 | 7330 | F8 |
| 0390 | A9 | 2540 | F5 | 3362 | F6 | 6021 | B9 | 7341 | F7 |
| 0392 | C8 | 2541 | F5 | 3363 | F6 | 6027 | C4 | 7348 | F7 |
| 1004 | C5 | 2600 | E3 | 3364 | F6 | 6028 | B4 | 7351 | F7 |
| 1005 | B8 | 2601 | D3 | 3365 | F7 | 6041 | B8 | 7352 | F7 |
| 1041 | A7 | 2605 | D2 | 3366 | F7 | 6043 | C7 | 7362 | F6 |
| 1042 | A7 | 2610 | C2 | 3367 | F7 | 6044 | C8 | 7366 | F7 |
| 1045 | B8 | 2611 | C2 | 3368 | F8 | 6045 | B9 | 7370 | F6 |
| 1084 | B8 | 2616 | D4 | 3369 | F7 | 6050 | D8 | 7375 | F7 |
| 1110 | B6 | 2652 | C2 | 3370 | F6 | 6054 | B9 | 7376 | F7 |
| 1200 | E7 | 2654 | C2 | 3371 | F6 | 6055 | B9 | 7389 | F8 |
| 1260 | F9 | 2655 | C2 | 3372 | F5 | 6061 | C8 | 7391 | F6 |
| 1400 | F1 | 2662 | A2 | 3373 | F7 | 6075 | C5 | 7393 | F6 |
| 1401 | E8 | 2663 | A3 | 3374 | F7 | 6077 | A5 | 7500 | F4 |
| 1402 | F1 | 2664 | A2 | 3376 | F7 | 6120 | C8 | 7501 | F4 |
| 1450 | E5 | 2673 | D1 | 3377 | F7 | 6142 | D9 | 7502 | F5 |
| 1460 | E5 | 2674 | C1 | 3378 | F6 | 6206 | F7 | 7530 | F4 |
| 2000 | A6 | 2700 | A9 | 3380 | F7 | 6224 | E8 | 7531 | F4 |
| 2001 | B5 | 2703 | A9 | 3381 | F7 | 6225 | F8 | 7540 | F5 |
| 2002 | A4 | 2709 | A8 | 3382 | F7 | 6230 | E7 | 7608 | B2 |
| 2003 | A4 | 3014 | C4 | 3385 | F7 | 6260 | F8 | 7610 | B3 |
| 2004 | A4 | 3015 | C4 | 3386 | F7 | 6267 | F9 | 7640 | B1 |
| 2005 | A4 | 3017 | B4 | 3387 | F7 | 6291 | A8 | 7641 | B1 |
| 2009 | A4 | 3018 | B4 | 3388 | F8 | 6312 | F7 | 7650 | C2 |
| 2011 | B5 | 3021 | A5 | 3389 | F8 | 6313 | F7 | 7660 | A3 |
| 2012 | A5 | 3024 | E8 | 3390 | F6 | 6314 | F7 | 7700 | A8 |
| 2013 | C5 | 3026 | D6 | 3391 | F6 | 6321 | F7 | | |
| 2014 | A5 | 3046 | A6 | 3392 | F6 | 6322 | F8 | | |
| 2016 | A4 | 3050 | B5 | 3393 | F6 | 6324 | F7 | | |
| 2017 | B5 | 3053 | C9 | 3394 | F6 | 6325 | F5 | | |
| 2020 | C9 | 3054 | B9 | 3395 | F6 | 6333 | F8 | | |
| 2021 | D9 | 3075 | C4 | 3396 | F9 | 6334 | F8 | | |
| 2022 | B9 | 3077 | A5 | 3397 | F8 | 6335 | F8 | | |
| 2025 | E8 | 3118 | C7 | 3400 | F2 | 6340 | F8 | | |
| 2034 | A6 | 3119 | C7 | 3401 | F2 | 6341 | F8 | | |
| 2043 | B7 | 3127 | D6 | 3402 | F3 | 6342 | F8 | | |
| 2050 | D8 | 3129 | B6 | 3403 | F3 | 6344 | F7 | | |
| 2058 | B9 | 3138 | D7 | 3404 | F1 | 6347 | F7 | | |
| 2090 | A4 | 3139 | D7 | 3450 | E4 | 6348 | F7 | | |
| 2113 | C6 | 3146 | E7 | 3451 | E4 | 6362 | F6 | | |
| 2118 | C6 | 3201 | E6 | 3452 | D2 | 6364 | F6 | | |
| 2121 | D6 | 3218 | F5 | 3506 | E4 | 6365 | F7 | | |
| 2122 | D6 | 3219 | F6 | 3507 | F4 | 6375 | F7 | | |
| 2133 | D6 | 3302 | F9 | 3508 | D4 | 6376 | F7 | | |
| 2138 | E6 | 3303 | F8 | 3608 | B2 | 6378 | F7 | | |
| 2210 | F6 | 3304 | F8 | 3610 | B2 | 6390 | F6 | | |
| 2218 | F6 | 3305 | F8 | 3611 | B3 | 6501 | F4 | | |
| 2219 | E6 | 3306 | F8 | 3614 | C2 | 6502 | F4 | | |
| 2224 | E8 | 3307 | F8 | 3615 | C2 | 6505 | F5 | | |
| 2225 | F8 | 3308 | F7 | 3650 | C2 | 6600 | E3 | | |
| 2228 | E9 | 3309 | F7 | 3653 | B2 | 6605 | D4 | | |
| 2230 | E7 | 3310 | F8 | 3662 | A3 | 6606 | E4 | | |
| 2231 | E7 | 3312 | F8 | 3663 | A3 | 6609 | B3 | | |
| 2261 | F9 | 3313 | F8 | 3666 | C2 | 6611 | C3 | | |
| 2269 | F9 | 3316 | F8 | 3668 | C1 | 6616 | C3 | | |
| 2270 | F9 | 3317 | F8 | 3670 | D1 | 7001 | A4 | | |
| 2292 | A8 | 3318 | F7 | 3673 | C1 | 7002 | D5 | | |
| 2294 | A9 | 3319 | F7 | 3674 | C1 | 7003 | D5 | | |
| 2303 | F8 | 3320 | F8 | 3675 | A3 | 7005 | C5 | | |
| 2304 | F8 | 3321 | F7 | 3676 | A3 | 7006 | A5 | | |
| 2305 | F8 | 3322 | F8 | 3800 | F9 | 7007 | C4 | | |
| 2306 | F8 | 3323 | F8 | 3801 | F8 | 7008 | B4 | | |
| 2316 | F7 | 3324 | F8 | 3802 | F8 | 7010 | D5 | | |
| 2322 | F8 | 3325 | F5 | 3803 | F9 | 7011 | D5 | | |
| 2324 | F8 | 3326 | F5 | 3804 | F8 | 7020 | C4 | | |
| 2343 | F7 | 3327 | F5 | 3805 | F8 | 7021 | B4 | | |
| 2350 | F7 | 3328 | F5 | 4300 | F2 | 7042 | C9 | | |
| 2352 | F7 | 3330 | F8 | 5001 | B4 | 7050 | C8 | | |
| 2364 | F6 | 3331 | F8 | 5002 | B6 | 7052 | C8 | | |
| 2366 | F7 | 3332 | F8 | 5003 | D5 | 7059 | B8 | | |
| 2370 | F6 | 3333 | F8 | 5120 | D7 | 7092 | B4 | | |
| 2376 | F7 | 3334 | F8 | 5200 | E6 | 7093 | B4 | | |
| 2380 | F7 | 3335 | F8 | 5220 | F7 | 7110 | B6 | | |
| 2381 | F7 | 3338 | F8 | 5224 | E9 | 7111 | B6 | | |
| 2385 | F7 | 3339 | F8 | 5225 | E9 | 7112 | C6 | | |
| 2393 | F6 | 3340 | F8 | 5260 | F8 | 7117 | C6 | | |
| 2396 | F8 | 3341 | F7 | 5268 | F9 | 7120 | C6 | | |
| 2400 | F2 | 3342 | F7 | 5290 | B9 | 7121 | C6 | | |
| 2401 | F3 | 3344 | F7 | 5291 | A9 | 7130 | D6 | | |

## Layout Power Supply Panel (FM23 AC) (Part 1 Top Side)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3372
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7327
7370
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8
0319
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6335
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6334
3323
3332
7389
7304
K A R
6225
K
7220
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3 4
7227
K A R
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1260
0352
0342
1
7
5268
2261
6260
A
6267
2269
2270
7260
9
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10
18
0305
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9
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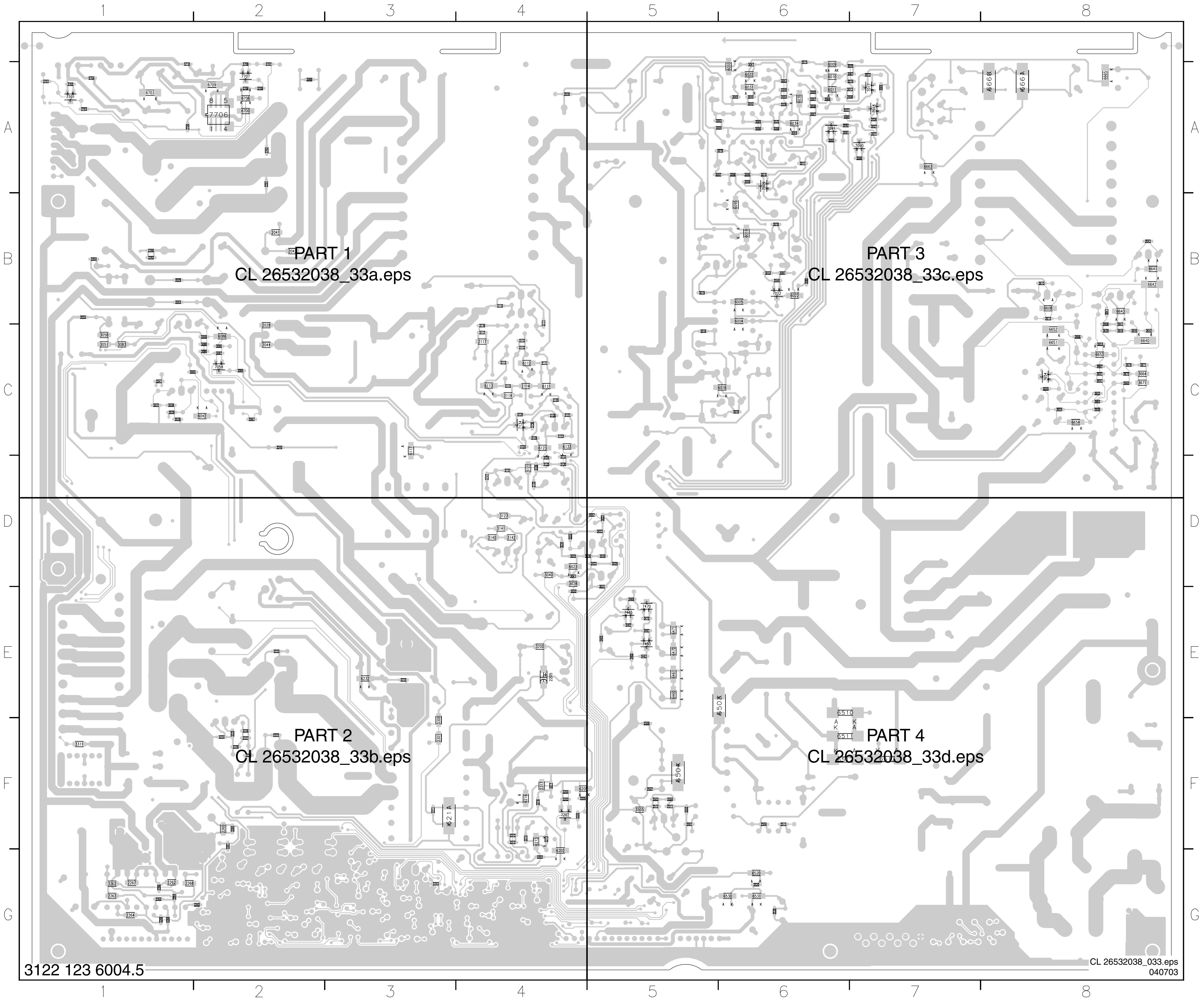
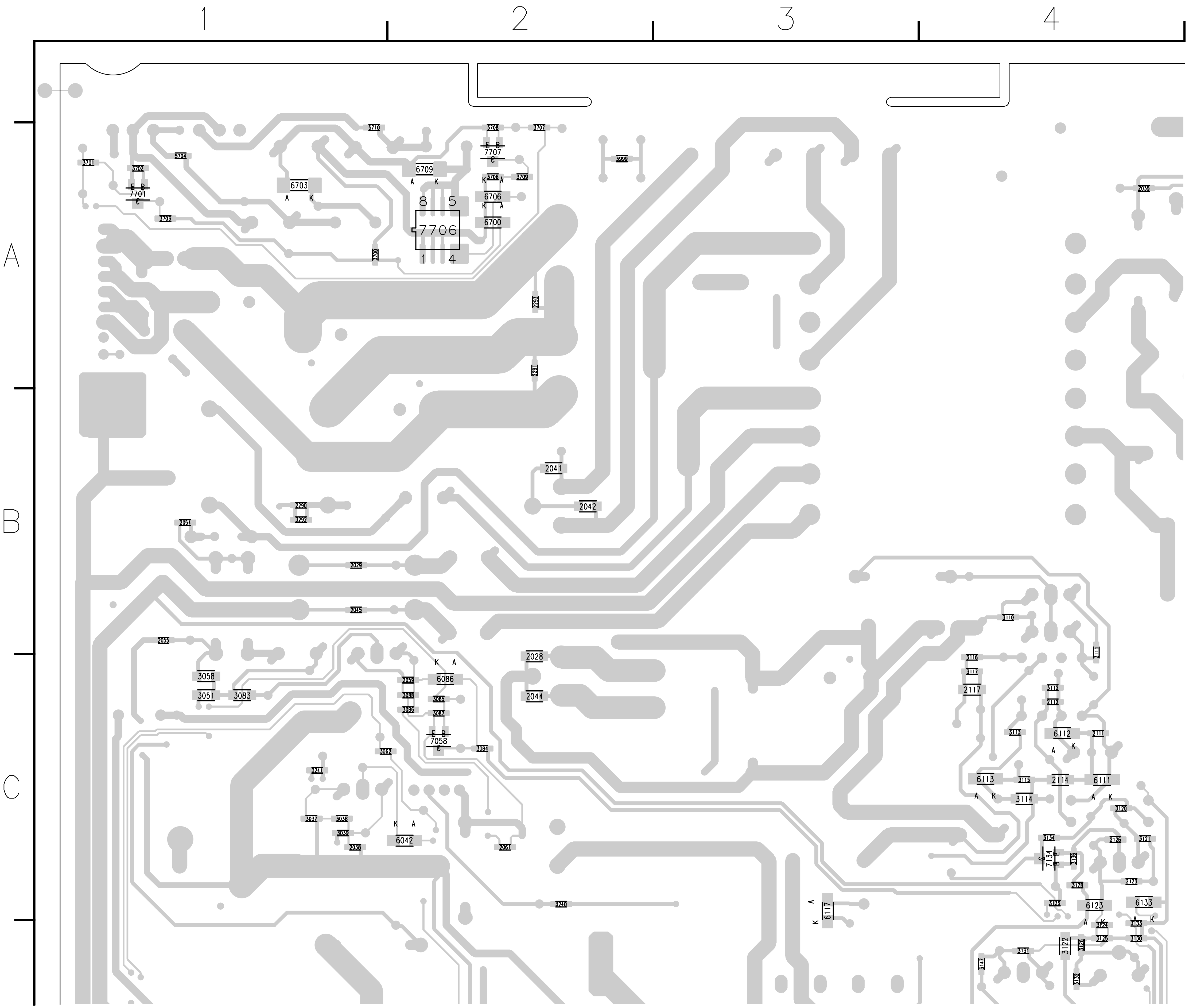
290302

## Layout Power Supply Panel (FM23 AC) (Overview Bottom Side)



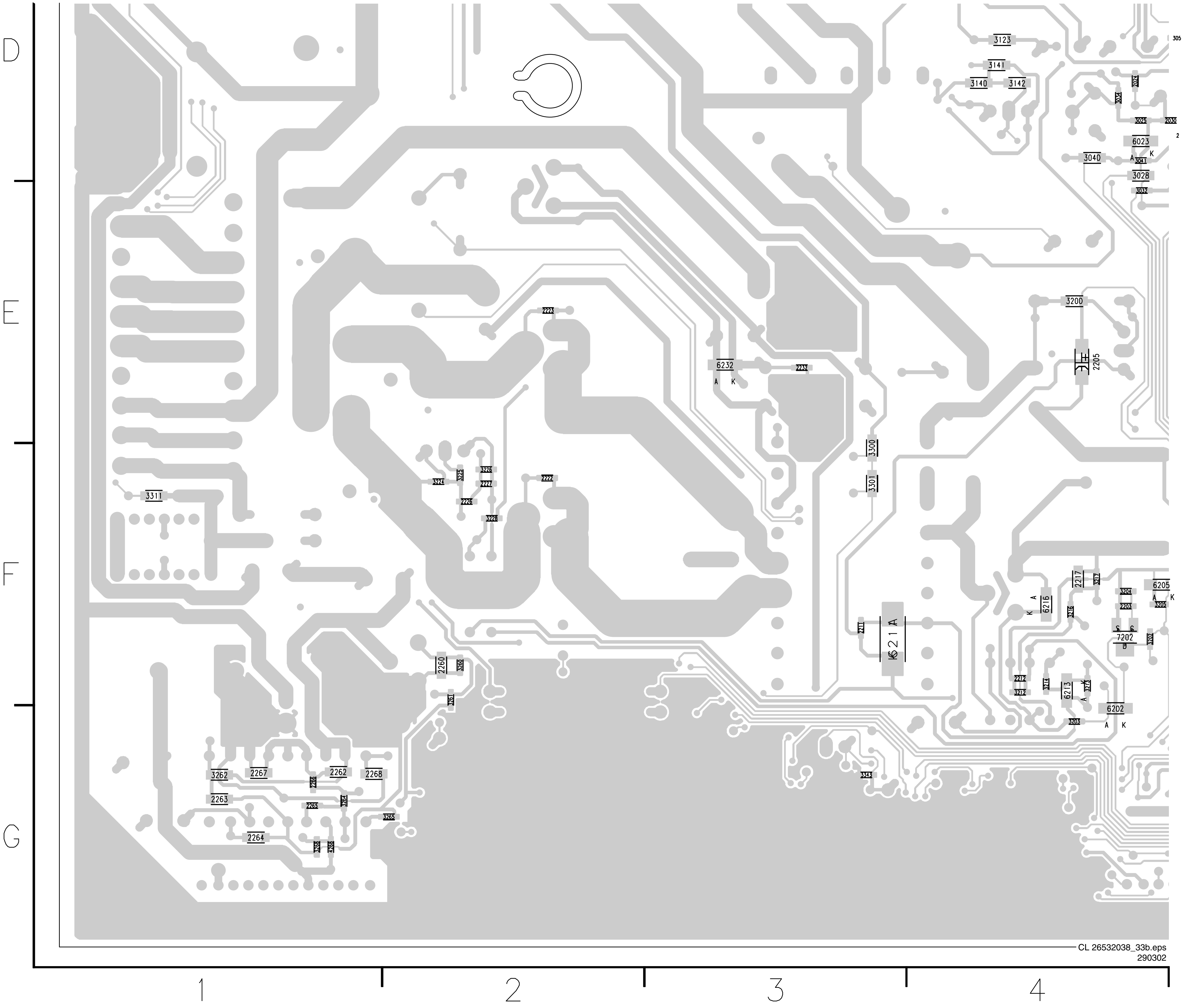
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2006 | A6 | 3029 | D5 | 3264 | G1 | 6643 | B8 |
| 2007 | A6 | 3030 | D5 | 3265 | G2 | 6651 | C8 |
| 2008 | A7 | 3031 | E5 | 3268 | G1 | 6652 | C8 |
| 2010 | A7 | 3032 | E4 | 3292 | B1 | 6653 | C8 |
| 2015 | A6 | 3033 | B6 | 3300 | F3 | 6654 | C8 |
| 2023 | D5 | 3034 | D4 | 3301 | F3 | 6660 | A8 |
| 2024 | D4 | 3037 | C1 | 3311 | F1 | 6661 | A8 |
| 2026 | A7 | 3038 | C1 | 3343 | G3 | 6663 | A7 |
| 2027 | A6 | 3039 | C1 | 3460 | E5 | 6665 | A8 |
| 2028 | C2 | 3040 | D4 | 3461 | E5 | 6700 | A2 |
| 2029 | B1 | 3041 | D4 | 3463 | E5 | 6703 | A1 |
| 2030 | D5 | 3042 | A6 | 3465 | E5 | 6706 | A2 |
| 2032 | A6 | 3043 | A6 | 3467 | E5 | 6709 | A2 |
| 2033 | A6 | 3044 | A6 | 3469 | E5 | 7009 | A6 |
| 2035 | A4 | 3045 | A6 | 3470 | E5 | 7017 | A7 |
| 2036 | A6 | 3047 | A6 | 3501 | F5 | 7018 | A7 |
| 2038 | C1 | 3048 | A6 | 3502 | F5 | 7022 | B6 |
| 2040 | B6 | 3049 | A6 | 3503 | F5 | 7058 | C2 |
| 2041 | B2 | 3051 | C1 | 3504 | F5 | 7090 | A7 |
| 2042 | B2 | 3056 | A6 | 3505 | F5 | 7091 | A6 |
| 2044 | C2 | 3057 | D5 | 3520 | G6 | 7134 | C4 |
| 2045 | B1 | 3058 | C1 | 3530 | G6 | 7202 | F4 |
| 2054 | B1 | 3062 | C1 | 3639 | C8 | 7460 | E5 |
| 2055 | B1 | 3064 | A7 | 3640 | C8 | 7465 | E5 |
| 2059 | C2 | 3065 | A6 | 3641 | B8 | 7470 | E5 |
| 2061 | C2 | 3066 | A6 | 3642 | C8 | 7654 | C8 |
| 2111 | C4 | 3067 | A7 | 3651 | C8 | 7701 | A1 |
| 2112 | C4 | 3070 | A6 | 3652 | C8 | 7706 | A2 |
| 2114 | C4 | 3071 | A7 | 3654 | C8 | 7707 | A2 |
| 2117 | C4 | 3076 | C6 | 3655 | C8 | | |
| 2123 | C4 | 3078 | B6 | 3664 | C8 | | |
| 2126 | C4 | 3080 | B6 | 3665 | C8 | | |
| 2203 | F4 | 3081 | B6 | 3667 | C8 | | |
| 2205 | E4 | 3083 | C1 | 3671 | C8 | | |
| 2211 | F3 | 3084 | C2 | 3700 | A1 | | |
| 2212 | F4 | 3085 | C2 | 3701 | A1 | | |
| 2217 | F4 | 3086 | C2 | 3702 | A1 | | |
| 2222 | F2 | 3087 | C2 | 3703 | A1 | | |
| 2223 | E2 | 3088 | C2 | 3706 | A2 | | |
| 2226 | F2 | 3090 | A7 | 3707 | A2 | | |
| 2227 | F2 | 3091 | A6 | 3708 | A2 | | |
| 2232 | E3 | 3092 | A6 | 3709 | A2 | | |
| 2260 | F2 | 3093 | A6 | 3999 | A2 | | |
| 2262 | G1 | 3095 | A6 | 4268 | G1 | | |
| 2263 | G1 | 3096 | A6 | 5704 | A1 | | |
| 2264 | G1 | 3097 | A6 | 5710 | A1 | | |
| 2265 | G1 | 3110 | B4 | 6004 | B6 | | |
| 2266 | G1 | 3111 | B4 | 6005 | B6 | | |
| 2267 | G1 | 3112 | C4 | 6009 | A6 | | |
| 2268 | G1 | 3113 | C4 | 6010 | A6 | | |
| 2290 | B1 | 3114 | C4 | 6011 | A6 | | |
| 2291 | A2 | 3115 | C4 | 6018 | C6 | | |
| 2293 | A2 | 3116 | C4 | 6019 | B6 | | |
| 2504 | F6 | 3117 | C4 | 6022 | B6 | | |
| 2507 | F5 | 3120 | C4 | 6023 | D4 | | |
| 2509 | F5 | 3121 | C4 | 6031 | A6 | | |
| 2511 | F5 | 3122 | D4 | 6032 | A6 | | |
| 2512 | F5 | 3123 | D4 | 6033 | A6 | | |
| 2513 | F6 | 3124 | D4 | 6034 | A6 | | |
| 2608 | C8 | 3125 | D4 | 6035 | A6 | | |
| 2612 | B8 | 3126 | D4 | 6042 | C2 | | |
| 2613 | B8 | 3128 | C4 | 6086 | C2 | | |
| 2640 | C8 | 3130 | D4 | 6095 | B6 | | |
| 2641 | C8 | 3131 | D4 | 6111 | C4 | | |
| 2642 | B8 | 3132 | D4 | 6112 | C4 | | |
| 2651 | C8 | 3133 | D4 | 6113 | C4 | | |
| 2653 | C8 | 3134 | C4 | 6117 | C3 | | |
| 2656 | C8 | 3135 | C4 | 6123 | C4 | | |
| 2665 | C8 | 3136 | C4 | 6133 | C4 | | |
| 2666 | C8 | 3140 | D4 | 6202 | G4 | | |
| 2670 | C8 | 3141 | D4 | 6205 | F4 | | |
| 2671 | C8 | 3142 | D4 | 6211 | F3 | | |
| 2672 | C8 | 3147 | D4 | 6213 | F4 | | |
| 3003 | A6 | 3200 | E4 | 6216 | F4 | | |
| 3004 | A6 | 3202 | F4 | 6232 | E3 | | |
| 3005 | A6 | 3203 | G4 | 6460 | E5 | | |
| 3006 | A6 | 3204 | F4 | 6461 | E5 | | |
| 3007 | A6 | 3205 | F4 | 6470 | E5 | | |
| 3008 | A6 | 3212 | F4 | 6471 | E5 | | |
| 3009 | A6 | 3213 | F4 | 6503 | E6 | | |
| 3010 | A6 | 3214 | F4 | 6504 | F5 | | |
| 3011 | A6 | 3216 | F4 | 6510 | E6 | | |
| 3012 | A7 | 3217 | F4 | 6511 | F6 | | |
| 3013 | A7 | 3224 | F2 | 6512 | F6 | | |
| 3016 | C5 | 3225 | F2 | 6513 | F7 | | |
| 3019 | B5 | 3226 | F2 | 6520 | G6 | | |
| 3020 | A7 | 3228 | F2 | 6530 | G6 | | |
| 3022 | D5 | 3240 | C2 | 6531 | G6 | | |
| 3023 | D5 | 3241 | C1 | 6608 | B8 | | |
| 3025 | D4 | 3260 | F2 | 6640 | C8 | | |
| 3027 | A7 | 3261 | F2 | 6641 | B8 | | |
| 3028 | D4 | 3262 | G1 | 6642 | B8 | | |

## Layout Power Supply Panel (FM23 AC) (Part 1 Bottom Side)

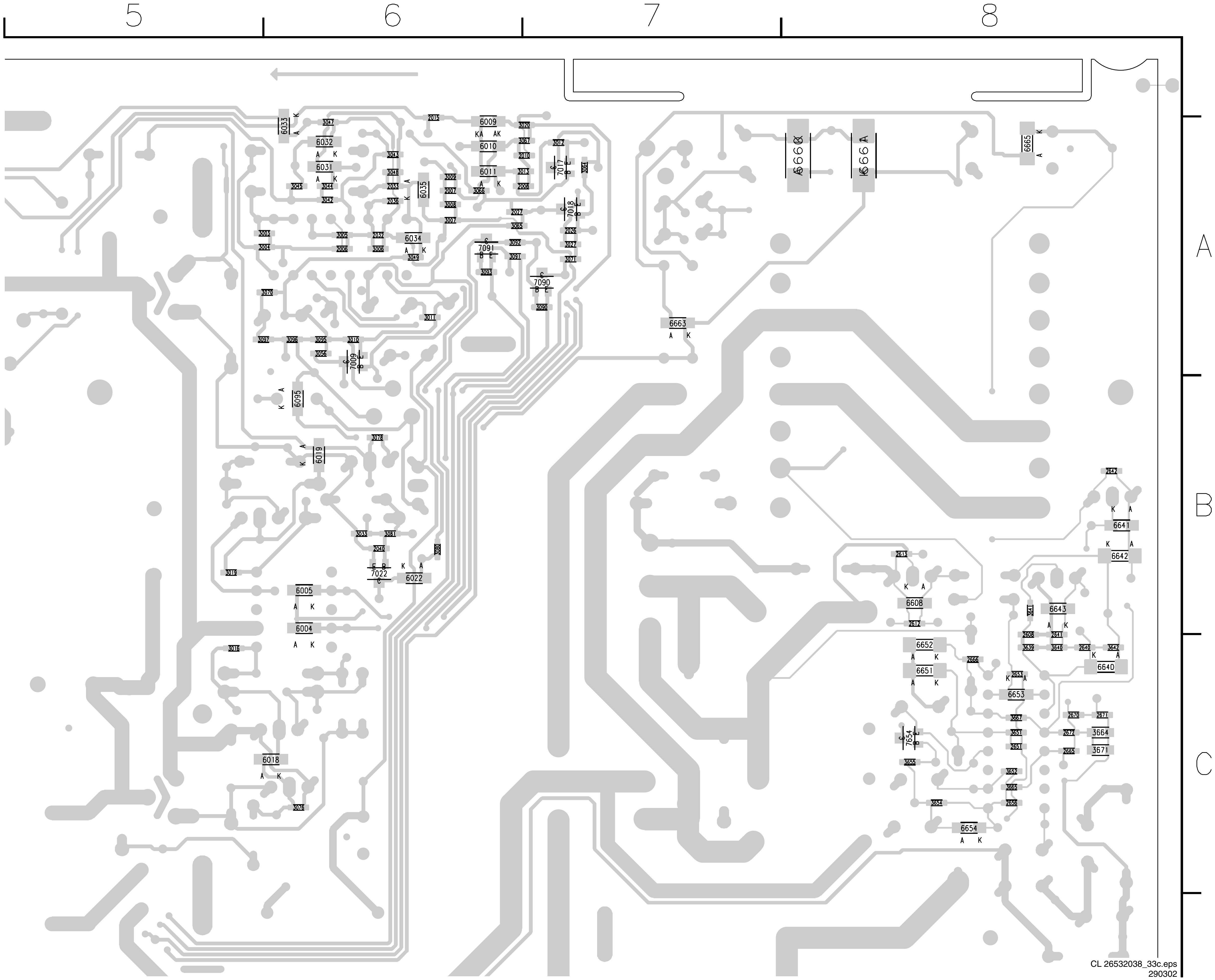

1
2
3
4
A
B
C
7706
8
5
1
4
6709
6703
6706
6700
7707
7701
2041
2042
2028
2044
3058
3051
3083
6086
7058
6042
6117
2117
6112
6113
2114
6111
3114
7134
6123
6133
3122

CL 26532038_33a.eps
290302

## Layout Power Supply Panel (FM23 AC) (Part 2 Bottom Side)

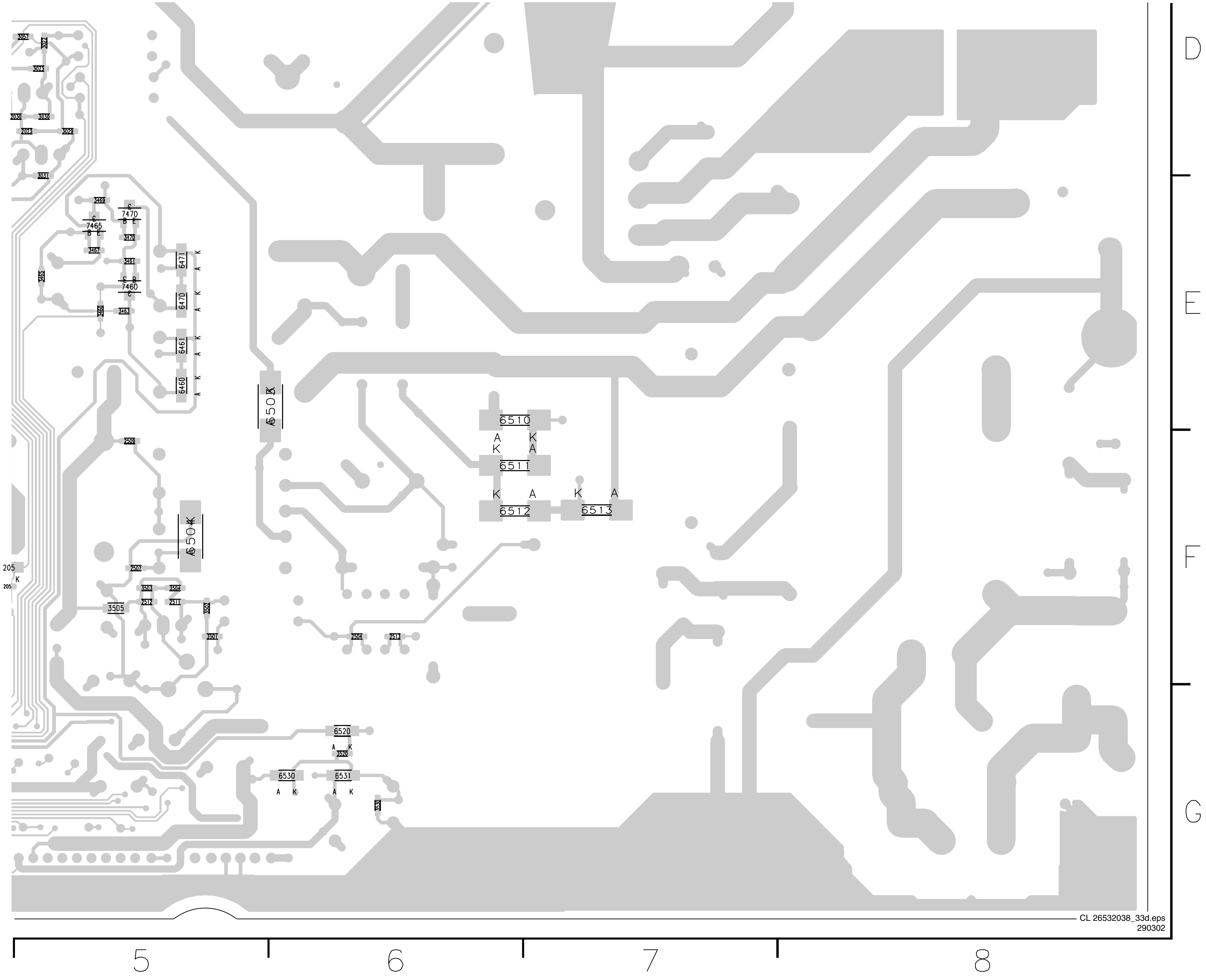

D
E
F
G
1
2
3
4
3123
3141
3140
3142
305
3025
2050
6023
3040
3028
3200
2205
6232
A
K
3300
3301
3311
2217
6205
6216
7202
6213
6202
621A
2260
3262
2267
2262
2268
2263
2264
CL 26532038_33b.eps
290302

## Layout Power Supply Panel (FM23 AC) (Part 3 Bottom Side)


5
6
7
8
A
B
C
6033
6032
6031
6009
6010
6011
6035
7017
7018
6034
7091
7090
7009
6095
6019
7022
6022
6005
6004
6018
6663
6665
6641
6642
6608
6643
6652
6651
6653
6640
6654
7654
3664
3671

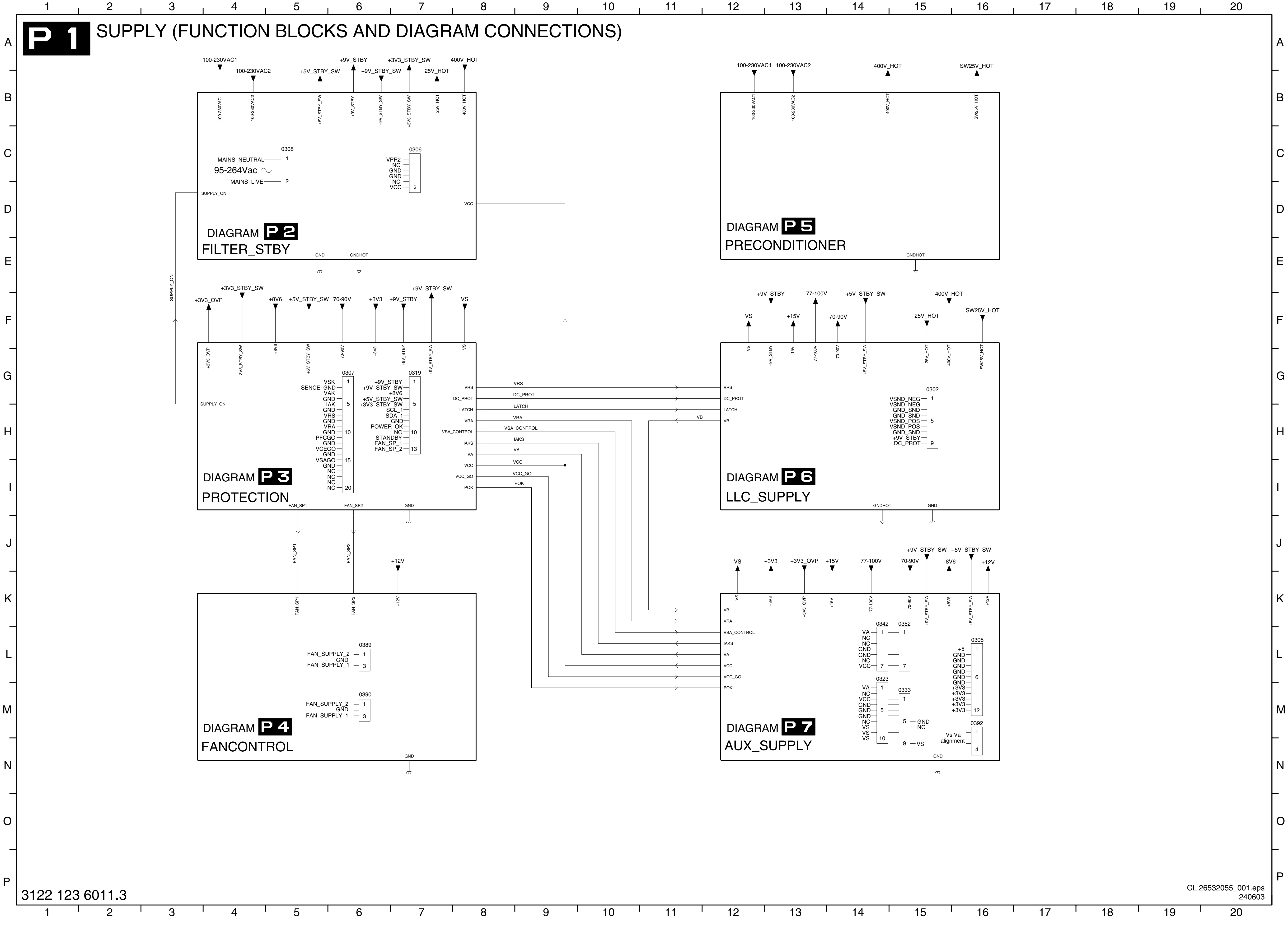
CL 26532038_33c.eps
290302

## Layout Power Supply Panel (FM23 AC) (Part 4 Bottom Side)

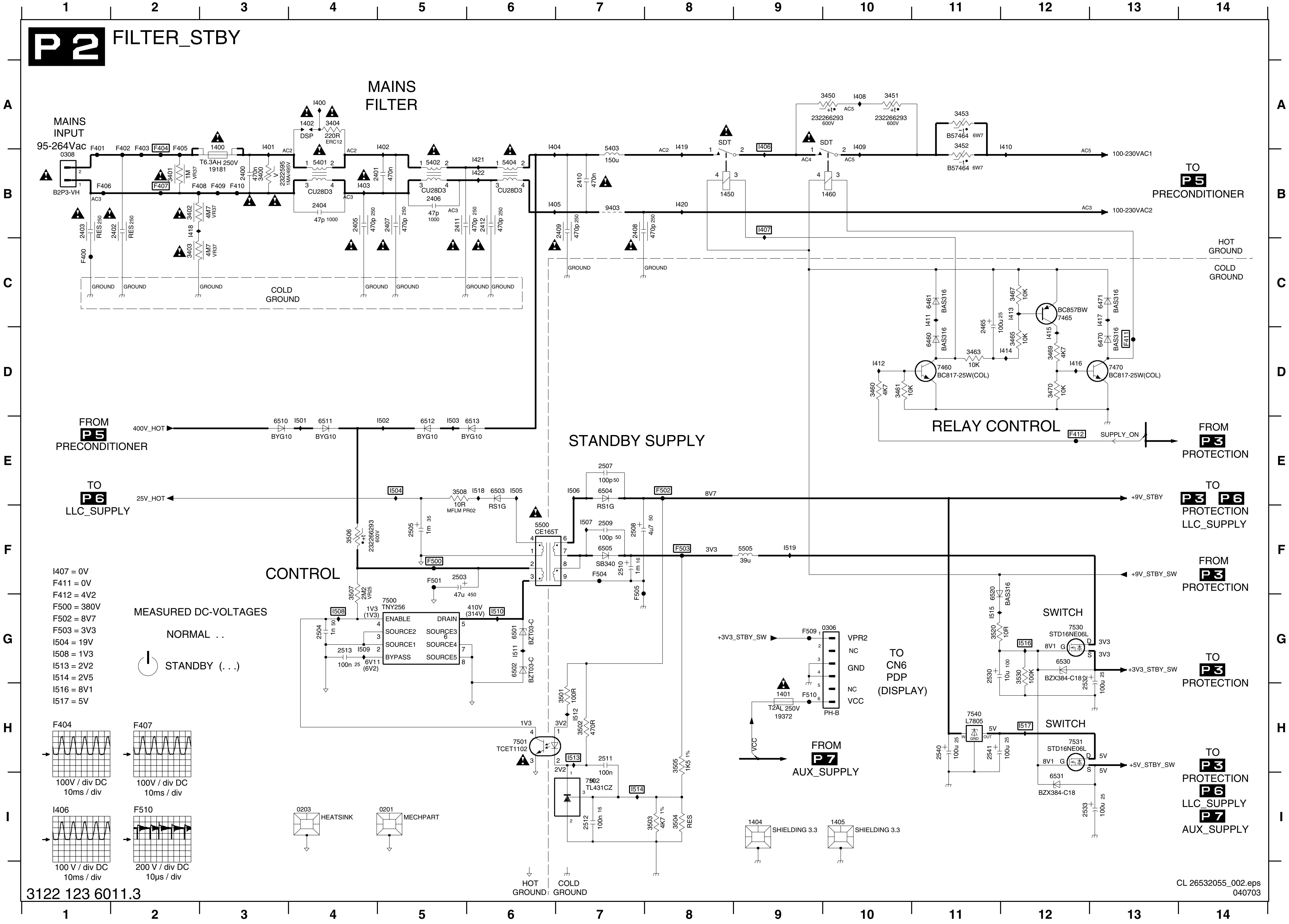

D
E
F
G
5
6
7
8
7470
7465
7460
6471
6470
6461
6460
6510
6511
6512
6513
6520
6530
6531
3505
2509
2507
3503
3504
2512
2511
3501
2504
2513
205
A
K

CL 26532038_33d.eps
290302

## Power Supply Panel (FM24 AB): Function Blocks and Diagram Connections


P 1
SUPPLY (FUNCTION BLOCKS AND DIAGRAM CONNECTIONS)
DIAGRAM P 2
FILTER_STBY
100-230VAC1
100-230VAC2
+5V_STBY_SW
+9V_STBY
+9V_STBY_SW
+3V3_STBY_SW
25V_HOT
400V_HOT
0308
MAINS_NEUTRAL
95-264Vac
MAINS_LIVE
0306
VPR2
NC
GND
GND
NC
VCC
SUPPLY_ON
VCC
GND
GNDHOT
DIAGRAM P 5
PRECONDITIONER
SW25V_HOT
DIAGRAM P 3
PROTECTION
+3V3_OVP
+8V6
70-90V
+3V3
+9V_STBY_SW
VS
0307
VSK
SENCE_GND
VAK
IAK
VRS
VRA
PFCGO
VCEGO
VSAGO
0319
SCL_1
SDA_1
POWER_OK
STANDBY
FAN_SP_1
FAN_SP_2
VRS
DC_PROT
LATCH
VRA
VSA_CONTROL
IAKS
VA
VCC
VCC_GO
POK
FAN_SP1
FAN_SP2
DIAGRAM P 6
LLC_SUPPLY
+15V
77-100V
VB
0302
VSND_NEG
GND_SND
VSND_POS
DIAGRAM P 4
FANCONTROL
+12V
0389
FAN_SUPPLY_2
GND
FAN_SUPPLY_1
0390
DIAGRAM P 7
AUX_SUPPLY
0342
0352
0323
0333
0305
+5
0392
Vs Va alignment
3122 123 6011.3
CL 26532055_001.eps
240603

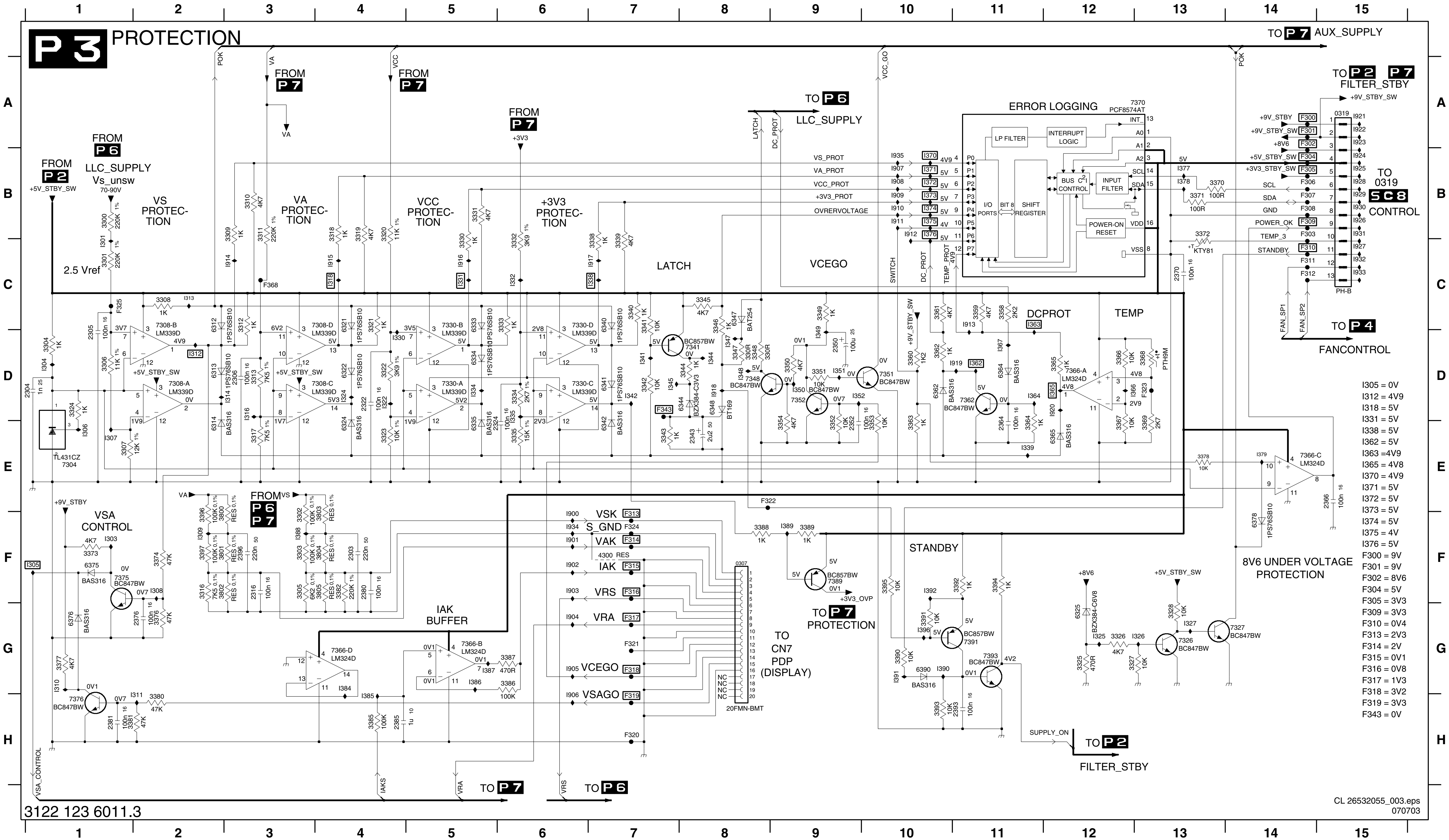
## Power Supply Panel (FM24 AB): Filter Standby


P2 FILTER_STBY
MAINS INPUT
95-264Vac
0308
B2P3-VH
MAINS FILTER
1400
T6.3AH 250V
19181
1402
DSP
3404
220R
ERC12
5401
5402
5404
CU28D3
2404
47p 1000
2406
47p 1000
3400
2322595
3401
1M
3402
4M7
3403
4M7
VR37
RES
F400
F401
F402
F403
F404
F405
F406
F407
F408
F409
F410
I400
I401
I402
I403
I404
I405
I418
I419
I420
I421
I422
5403
150u
9403
2410
470n
2409
470p
2408
470p
GROUND
COLD GROUND
SDT
1450
1460
I406
I407
I408
I409
I410
3450
3451
232266293
600V
3452
3453
B57464
6W7
100-230VAC1
100-230VAC2
TO
P5
PRECONDITIONER
HOT GROUND
COLD GROUND
6460
6461
6470
6471
BAS316
I411
I412
I413
I414
I415
I416
I417
3460
4K7
3461
10K
3463
10K
3465
10K
3467
10K
3469
4K7
3470
10K
2465
100u
7460
BC817-25W(COL)
7465
BC857BW
7470
BC817-25W(COL)
F411
RELAY CONTROL
F412
SUPPLY_ON
FROM
P3
PROTECTION
FROM
P5
PRECONDITIONER
400V_HOT
6510
6511
6512
6513
BYG10
I501
I502
I503
STANDBY SUPPLY
TO
P6
LLC_SUPPLY
25V_HOT
I504
3508
10R
MFLM PR02
I518
6503
RS1G
I505
I506
6504
RS1G
2507
100p
F502
8V7
+9V_STBY
TO
P3 P6
PROTECTION
LLC_SUPPLY
5500
CE165T
I507
2509
100p
6505
SB340
2508
4u7
2510
1m
F503
3V3
5505
39u
I519
F504
F505
FROM
P3
PROTECTION
+9V_STBY_SW
2505
1m
3506
232266293
600V
F500
F501
2503
47u 450
CONTROL
3507
2M2
VR25
7500
TNY256
ENABLE
DRAIN
SOURCE2
SOURCE3
SOURCE1
SOURCE4
BYPASS
SOURCE5
1V3
(1V3)
410V
(314V)
I508
I509
I510
I511
2504
1n
2513
100n
6V11
(6V2)
6501
6502
BZT03-C
I407 = 0V
F411 = 0V
F412 = 4V2
F500 = 380V
F502 = 8V7
F503 = 3V3
I504 = 19V
I508 = 1V3
I513 = 2V2
I514 = 2V5
I516 = 8V1
I517 = 5V
MEASURED DC-VOLTAGES
NORMAL . .
STANDBY ( . . .)
+3V3_STBY_SW
F509
0306
PH-B
VPR2
NC
GND
NC
VCC
TO
CN6
PDP
(DISPLAY)
1401
F510
T2AL 250V
19372
VCC
FROM
P7
AUX_SUPPLY
6520
BAS316
I515
3520
10R
I516
8V1
SWITCH
7530
STD16NE06L
3V3
6530
BZX384-C18
2530
10u
3530
100K
2532
100u
TO
P3
PROTECTION
7540
L7805
5V
I517
SWITCH
7531
STD16NE06L
5V
+5V_STBY_SW
2540
100u
2541
100u
6531
BZX384-C18
2533
100u
TO
P3
PROTECTION
P6
LLC_SUPPLY
P7
AUX_SUPPLY
1V3
3V2
7501
TCET1102
3501
100R
I512
3502
470R
I513
2V2
2511
100n
7502
TL431CZ
I514
2512
100n
3503
4K7
3504
RES
3505
1K5
F404
F407
100V / div DC
10ms / div
I406
F510
100 V / div DC
10ms / div
200 V / div DC
10μs / div
0203
HEATSINK
0201
MECHPART
1404
SHIELDING 3.3
1405
SHIELDING 3.3
HOT GROUND
COLD GROUND
3122 123 6011.3
CL 26532055_002.eps
040703
A B C D E F G H I
1 2 3 4 5 6 7 8 9 10 11 12 13 14

| | |
|---|---|
| 0201 | I5 |
| 0203 | I4 |
| 0306 | G9 |
| 0308 | B1 |
| 1400 | B3 |
| 1401 | H9 |
| 1402 | A4 |
| 1404 | I9 |
| 1405 | I10 |
| 1450 | B8 |
| 1460 | B10 |
| 2400 | B3 |
| 2401 | B5 |
| 2402 | B2 |
| 2403 | B1 |
| 2404 | B4 |
| 2405 | B4 |
| 2406 | B5 |
| 2407 | B5 |
| 2408 | B7 |
| 2409 | B7 |
| 2410 | B7 |
| 2411 | B5 |
| 2412 | B6 |
| 2465 | C11 |
| 2503 | F5 |
| 2504 | G4 |
| 2505 | F5 |
| 2507 | E7 |
| 2508 | F7 |
| 2509 | F7 |
| 2510 | F7 |
| 2511 | H7 |
| 2512 | I7 |
| 2513 | G4 |
| 2530 | G11 |
| 2532 | G12 |
| 2533 | I12 |
| 2540 | H11 |
| 2541 | H11 |
| 3400 | B3 |
| 3401 | B2 |
| 3402 | B2 |
| 3403 | C2 |
| 3404 | A4 |
| 3450 | A10 |
| 3451 | A10 |
| 3452 | A11 |
| 3453 | A11 |
| 3460 | D10 |
| 3461 | D10 |
| 3463 | D11 |
| 3465 | D12 |
| 3467 | C12 |
| 3469 | D12 |
| 3470 | D12 |
| 3501 | H7 |
| 3502 | H7 |
| 3503 | I8 |
| 3504 | I8 |
| 3505 | H8 |
| 3506 | F4 |
| 3507 | F4 |
| 3508 | E5 |
| 3520 | G11 |
| 3530 | G12 |
| 5401 | B4 |
| 5402 | B5 |
| 5403 | B7 |
| 5404 | B6 |
| 5500 | F6 |
| 5505 | F9 |
| 6460 | D11 |
| 6461 | C11 |
| 6470 | D13 |
| 6471 | C13 |
| 6501 | G6 |
| 6502 | G6 |
| 6503 | E6 |
| 6504 | E7 |
| 6505 | F7 |
| 6510 | E3 |
| 6511 | E4 |
| 6512 | E5 |
| 6513 | E6 |
| 6520 | F11 |
| 6530 | G12 |
| 6531 | I12 |
| 7460 | D11 |
| 7465 | C12 |
| 7470 | D13 |
| 7500 | G5 |
| 7501 | H6 |
| 7502 | I7 |
| 7530 | G12 |
| 7531 | H12 |
| 7540 | H11 |
| 9403 | B7 |
| F400 | C1 |
| F401 | B1 |
| F402 | B2 |
| F403 | B2 |
| F404 | B2 |
| F405 | B2 |
| F406 | B1 |
| F407 | B2 |
| F408 | B2 |
| F409 | B3 |
| F410 | B3 |
| F411 | D13 |
| F412 | E12 |
| F500 | F5 |
| F501 | F5 |
| F502 | E8 |
| F503 | F8 |
| F504 | F7 |
| F505 | F7 |
| F509 | G9 |
| F510 | H9 |
| I400 | A4 |
| I401 | A3 |
| I402 | A5 |
| I403 | B4 |
| I404 | A6 |
| I405 | B6 |
| I406 | A9 |
| I407 | B9 |
| I408 | A10 |
| I409 | A10 |
| I410 | A12 |
| I411 | C11 |
| I412 | D10 |
| I413 | C12 |
| I414 | D12 |
| I415 | D12 |
| I416 | D12 |
| I417 | C13 |
| I418 | B2 |
| I419 | A8 |
| I420 | B8 |
| I421 | B6 |
| I422 | B6 |
| I501 | E4 |
| I502 | E5 |
| I503 | E5 |
| I504 | E5 |
| I505 | E6 |
| I506 | E7 |
| I507 | F7 |
| I508 | G4 |
| I509 | G4 |
| I510 | G6 |
| I511 | G6 |
| I512 | H7 |
| I513 | H7 |
| I514 | I7 |
| I515 | G11 |
| I516 | G12 |
| I517 | H12 |
| I518 | E6 |
| I519 | F9 |

## Power Supply Panel (FM24 AB): Protection

0307 F8
0319 A15
2303 F4
2304 D1
2305 D1
2306 D3
2316 F3
2322 D4
2324 E6
2343 E8
2350 D9
2352 E9
2364 E11
2366 E15
2370 C13
2376 G2
2380 F4
2381 H1
2385 H4
2393 H11
2396 F3
3300 B1
3301 C1
3302 F3
3303 F3
3304 D1
3305 F3
3306 D1
3307 E1
3308 C2
3309 B3
3310 B3
3311 B3
3312 C3
3313 D3
3316 F2
3317 E3
3318 B4
3319 B4
3320 B4
3321 C4
3322 D4
3323 E4
3324 D1
3325 G12
3326 G12
3327 G12
3328 G13
3330 C5
3331 B5
3332 C6
3333 C6
3334 D6
3335 E6
3338 C7
3339 C7
3340 C7
3341 C7
3342 D7
3343 E7
3344 D8
3345 C8
3346 C8
3347 D8
3348 D8
3349 C9
3350 D9
3351 D9
3352 E9
3353 E10
3354 E9
3358 C11
3359 C11
3360 D10
3361 C10
3362 D10
3363 E10
3364 E11
3365 D12
3366 D12
3367 E12
3368 D13
3369 E13
3370 B13
3371 B13
3372 B13
3373 F1
3374 F2
3376 G2
3377 G1
3378 E13
3380 H2
3381 H1
3382 F4
3385 H4
3386 G6
3387 G6
3388 F8
3389 F9
3390 G10
3391 G10
3392 F11
3393 H10
3394 F11
3395 F10
3396 F2
3397 F2
3800 F2
3801 F2
3802 F2
3803 F4
3804 F4
3805 F4
4300 F7
6312 C2
6313 D2
6314 E2
6321 C4
6322 D4
6324 E4
6325 G12
6333 C5
6334 D5
6335 E5
6340 C7
6341 D7
6342 E7
6344 D8
6347 C8
6348 D8
6362 D10
6364 D11
6365 E12
6375 F1
6376 G1
6378 F14
6390 G10
7304 E1
7308-A D2
7308-B C2
7308-C D3
7308-D C3
7326 G13
7327 G14
7330-A D5
7330-B C5
7330-C D6
7330-D C6
7341 D8
7348 D8
7351 D10
7352 D9
7362 D11
7366-A D12
7366-B G5
7366-C E14
7366-D G4
7370 A13
7375 F1
7376 H1
7389 F9
7391 G11
7393 G11
F300 A14
F301 A14
F302 A14
F303 B14
F304 B14
F305 B14
F306 B14
F307 B14
F308 B14
F309 B14
F310 C14
F311 C14
F312 C14
F313 F7
F314 F7
F315 F7
F316 F7
F317 G7
F318 G7
F319 H7
F320 H7
F321 G7
F322 E8
F323 D13
F324 F7
F325 C1
F343 D7
F368 C3
I301 C1
I303 F1
I304 D1
I305 F1
I306 E1
I307 E1
I308 F2
I309 F2
I310 G1
I311 H2
I312 D2
I313 C2
I314 D3
I316 D3
I318 C4
I322 D4
I324 D4
I325 G12
I326 G13
I327 G13
I330 D4
I331 C5
I332 C6
I334 D5
I335 D6
I338 C7
I339 E11
I341 D7
I342 D7
I344 D8
I345 D7
I347 D8
I348 D8
I349 D9
I350 D9
I351 D9
I352 D9
I362 D11
I363 C11
I364 D11
I365 D12
I366 D12
I367 D11
I370 B10
I371 B10
I372 B10
I373 B10
I374 B10
I375 B10
I376 B10
I377 B13
I378 B13
I379 E14
I384 G4
I385 H4
I386 G5
I387 G5
I388 F3
I389 F9
I390 G10
I391 G10
I392 F10
I396 G10
I900 F6
I901 F6
I902 F6
I903 F6
I904 G6
I905 G6
I906 H6
I907 B10
I908 B10
I909 B10
I910 B10
I911 B10
I912 B10
I913 C11
I914 C3
I915 C4
I916 C5
I917 C7
I918 D8
I919 D11
I920 D12
I921 A15
I922 A15
I923 A15
I924 B15
I925 B15
I926 B15
I927 C15
I928 B15
I929 B15
I930 B15
I931 B15
I932 C15
I933 C15
I934 F6
I935 B10

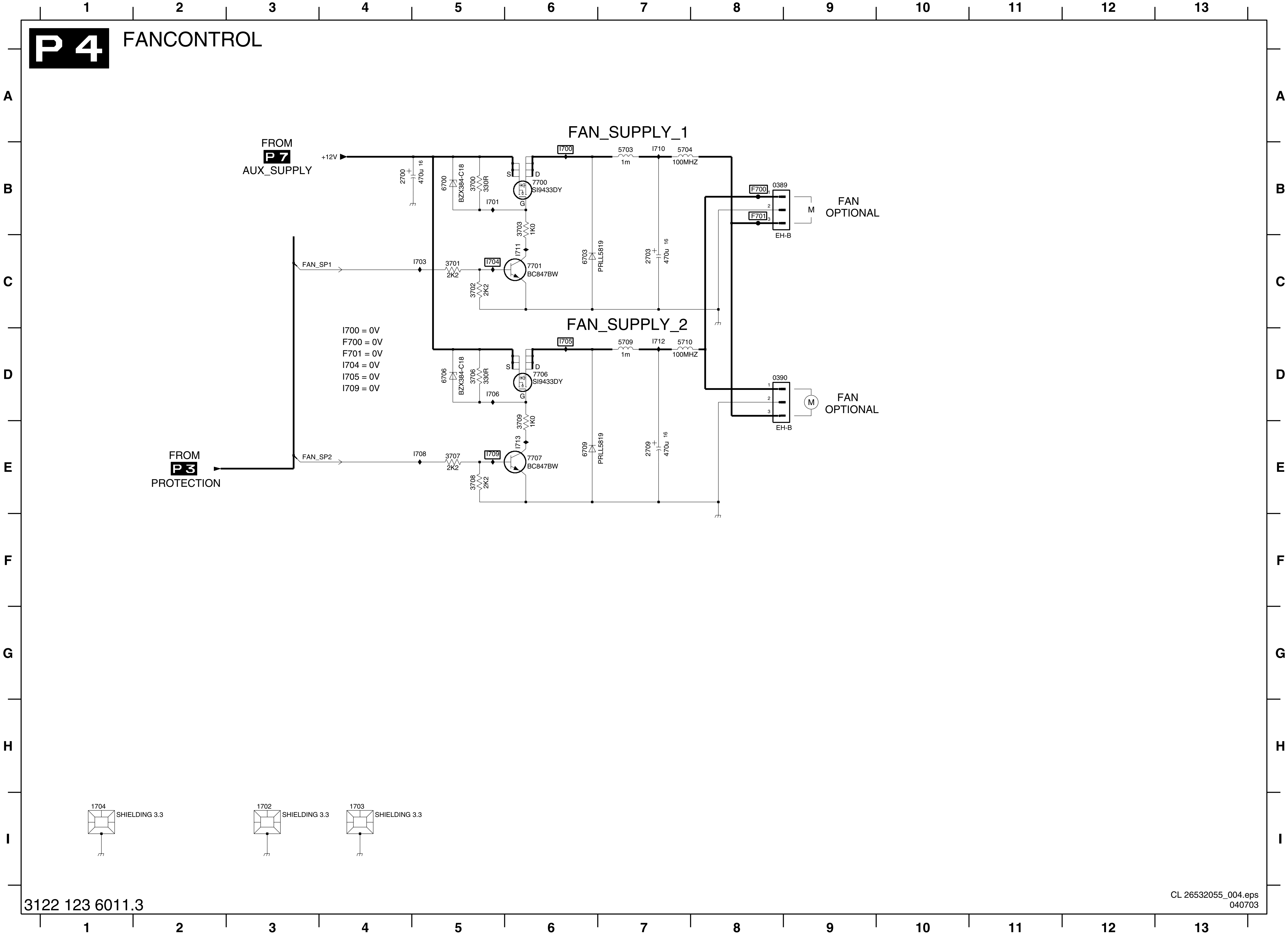

P 3 PROTECTION
FROM P 2 +5V_STBY_SW
FROM P 6 LLC_SUPPLY Vs_unsw 70-90V
VS PROTEC-TION
VA PROTEC-TION
VCC PROTEC-TION
+3V3 PROTEC-TION
FROM P 7 VA
FROM P 7 VCC
FROM P 7 +3V3
2.5 Vref
TL431CZ 7304
LATCH
VCEGO
TO P 6 LLC_SUPPLY
ERROR LOGGING
7370 PCF8574AT
LP FILTER
INTERRUPT LOGIC
I/O PORTS
SHIFT REGISTER
BUS CONTROL
INPUT FILTER
POWER-ON RESET
VS_PROT
VA_PROT
VCC_PROT
+3V3_PROT
OVRERVOLTAGE
DCPROT
TEMP
TO P 7 AUX_SUPPLY
TO P 2 P 7 FILTER_STBY
TO 0319 S C 8 CONTROL
TO P 4 FANCONTROL
8V6 UNDER VOLTAGE PROTECTION
VSA CONTROL
FROM P 6 P 7
IAK BUFFER
VSK
S_GND
VAK
IAK
VRS
VRA
VCEGO
VSAGO
TO CN7 PDP (DISPLAY)
20FMN-BMT
STANDBY
TO P 7 PROTECTION
+3V3_OVP
SUPPLY_ON
TO P 2 FILTER_STBY
TO P 7
TO P 6
VSA_CONTROL
IAKS
VRA
VRS

I305 = 0V
I312 = 4V9
I318 = 5V
I331 = 5V
I338 = 5V
I362 = 5V
I363 =4V9
I365 = 4V8
I370 = 4V9
I371 = 5V
I372 = 5V
I373 = 5V
I374 = 5V
I375 = 4V
I376 = 5V
F300 = 9V
F301 = 9V
F302 = 8V6
F304 = 5V
F305 = 3V3
F309 = 3V3
F310 = 0V4
F313 = 2V3
F314 = 2V
F315 = 0V1
F316 = 0V8
F317 = 1V3
F318 = 3V2
F319 = 3V3
F343 = 0V

3122 123 6011.3

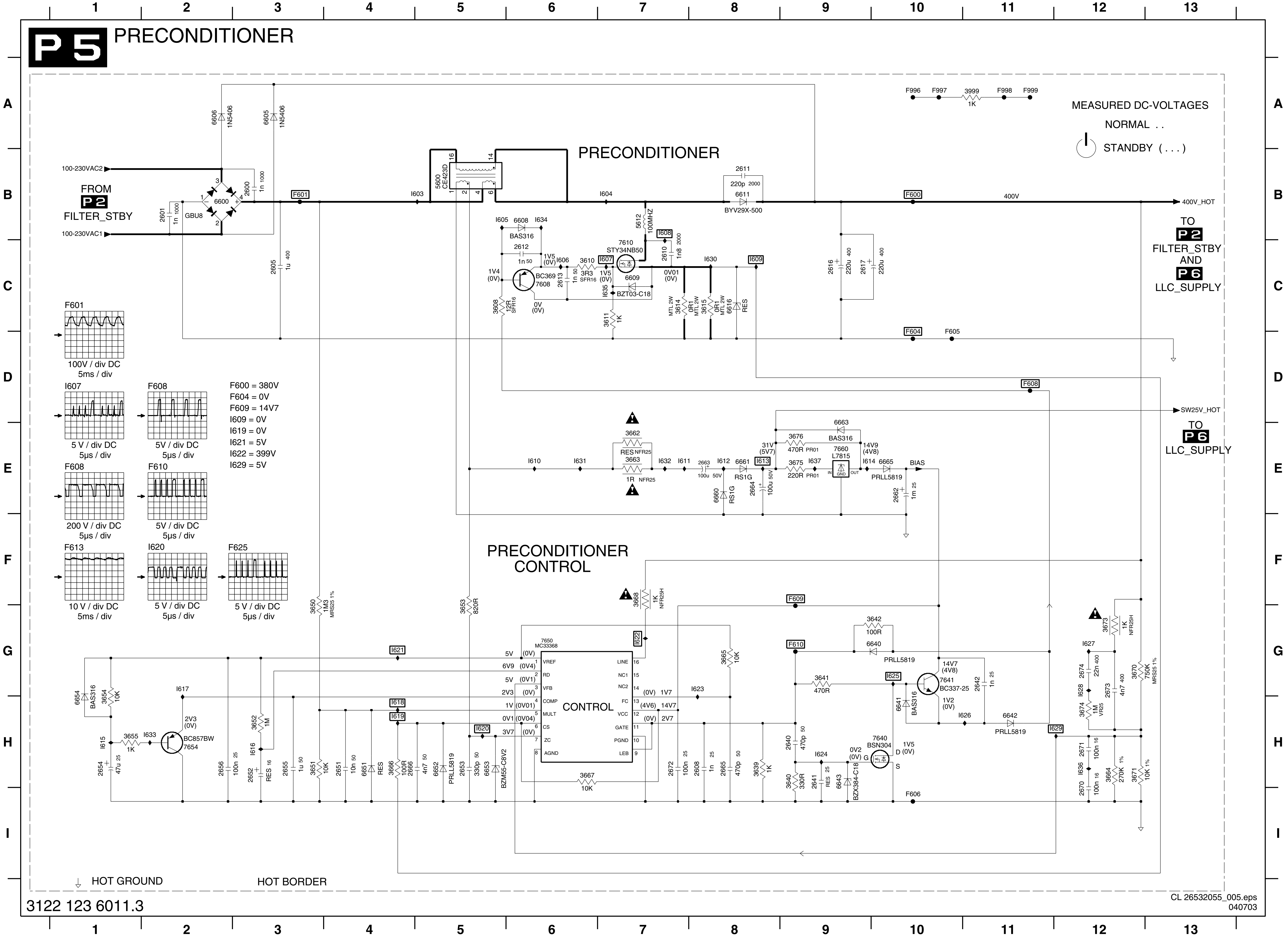
CL 26532055_003.eps
070703

## Power Supply Panel (FM24 AB): Fan Control


P 4
FANCONTROL
FROM
P 7
AUX_SUPPLY
+12V
FAN_SUPPLY_1
FAN_SUPPLY_2
FROM
P 3
PROTECTION
FAN_SP1
FAN_SP2
I700 = 0V
F700 = 0V
F701 = 0V
I704 = 0V
I705 = 0V
I709 = 0V
2700 470u 16
6700 BZX384-C18
3700 330R
I701
7700 SI9433DY
S
D
G
3703 1K0
I711
I703
3701 2K2
I704
7701 BC847BW
3702 2K2
6703 PRLL5819
2703 470u 16
I700
5703 1m
I710
5704 100MHZ
F700
F701
0389
EH-B
M
FAN OPTIONAL
6706 BZX384-C18
3706 330R
I706
7706 SI9433DY
3709 1K0
I713
I708
3707 2K2
I709
7707 BC847BW
3708 2K2
6709 PRLL5819
2709 470u 16
I705
5709 1m
I712
5710 100MHZ
0390
EH-B
M
FAN OPTIONAL
1704 SHIELDING 3.3
1702 SHIELDING 3.3
1703 SHIELDING 3.3
1 2 3 4 5 6 7 8 9 10 11 12 13
A B C D E F G H I
3122 123 6011.3
CL 26532055_004.eps
040703

| | |
|---|---|
| 0389 | B8 |
| 0390 | D8 |
| 1702 | I3 |
| 1703 | I4 |
| 1704 | I1 |
| 2700 | B4 |
| 2703 | C7 |
| 2709 | E7 |
| 3700 | B5 |
| 3701 | C5 |
| 3702 | C5 |
| 3703 | B6 |
| 3706 | D5 |
| 3707 | E5 |
| 3708 | E5 |
| 3709 | E6 |
| 5703 | B7 |
| 5704 | B7 |
| 5709 | D7 |
| 5710 | D7 |
| 6700 | B5 |
| 6703 | C6 |
| 6706 | D5 |
| 6709 | E6 |
| 7700 | B6 |
| 7701 | C6 |
| 7706 | D6 |
| 7707 | E6 |
| F700 | B8 |
| F701 | B8 |
| I700 | B6 |
| I701 | B5 |
| I703 | C5 |
| I704 | C5 |
| I705 | D6 |
| I706 | D5 |
| I708 | E5 |
| I709 | E5 |
| I710 | B7 |
| I711 | C6 |
| I712 | D7 |
| I713 | E6 |

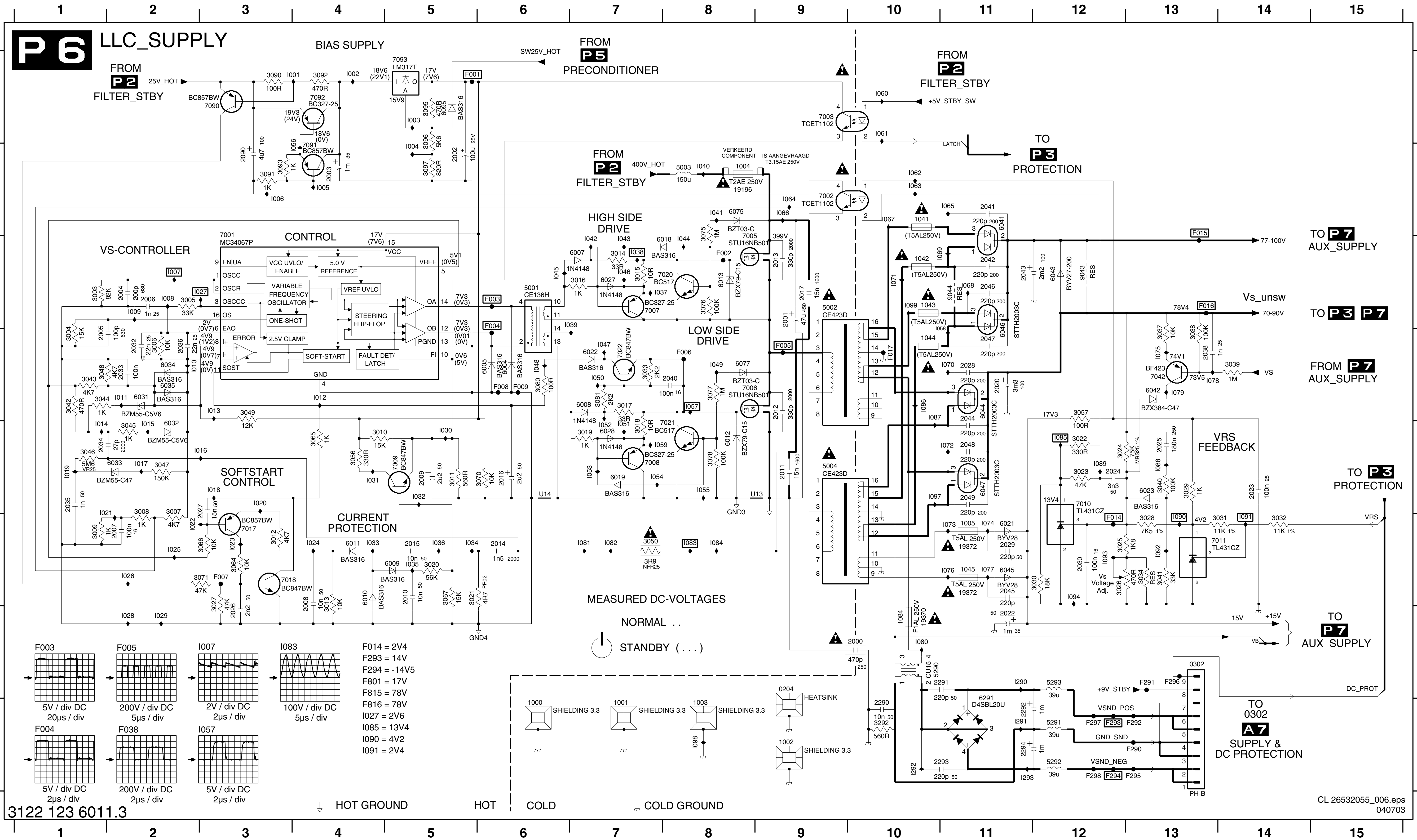
## Power Supply Panel (FM24 AB): Pre-Conditioner


P 5
PRECONDITIONER
PRECONDITIONER
PRECONDITIONER CONTROL
MEASURED DC-VOLTAGES
NORMAL . .
STANDBY ( . . . )
100-230VAC2
100-230VAC1
FROM
P 2
FILTER_STBY
400V_HOT
TO
P 2
FILTER_STBY
AND
P 6
LLC_SUPPLY
SW25V_HOT
TO
P 6
LLC_SUPPLY
400V
BIAS
F600 = 380V
F604 = 0V
F609 = 14V7
I609 = 0V
I619 = 0V
I621 = 5V
I622 = 399V
I629 = 5V
F601
100V / div DC
5ms / div
I607
5 V / div DC
5µs / div
F608
5V / div DC
5µs / div
F608
200 V / div DC
5µs / div
F610
5V / div DC
5µs / div
F613
10 V / div DC
5ms / div
I620
5 V / div DC
5µs / div
F625
5 V / div DC
5µs / div
6600 GBU8
6605 1N5406
6606 1N5406
2600 1n 1000
2601 1n 1000
2605 1u 400
5600 CE423D
5612 100MHZ
2611 220p 2000
6611 BYV29X-500
7610 STY34NB50
6609 BZT03-C18
7608 BC369
6608 BAS316
2612 1n 50
2613 1n 50
3610 3R3 SFR16
3608 12R SFR16
3611 1K
2610 1n8 2000
3614 0R1 MTL 2W
3615 0R1 MTL 2W
6616 RES
2616 220u 400
2617 220u 400
3999 1K
F996 F997 F998 F999
3662 RES NFR25
3663 1R NFR25
2663 100u 50V
6661 RS1G
6660 RS1G
2664 100u 50V
3676 470R PR01
3675 220R PR01
6663 BAS316
7660 L7815
6665 PRLL5819
2662 1m 25
3668 1K NFR25H
3650 1M3 MRS25 1%
3653 820R
7650 MC33368
CONTROL
VREF RD VFB COMP MULT CS ZC AGND
LINE NC1 NC2 FC VCC GATE PGND LEB
3665 10K
3667 10K
3642 100R
6640 PRLL5819
3641 470R
7641 BC337-25
6641 BAS316
2642 1n 25
6642 PRLL5819
7640 BSN304
6643 BZX384-C18
3640 330R
2641 RES 25
2640 470p 50
3673 1K NFR25H
2674 22n 400
2673 4n7 400
3674 1M VR25
3670 750K MRS25 1%
2671 100n 16
2670 100n 16
3664 270K 1%
3671 10K 1%
6654 BAS316
3654 10K
3655 1K
7654 BC857BW
2654 47u 25
3652 1M
2656 100n 25
2652 RES 16
2655 1u 50
3651 10K
2651 10n 50
6651 RES
3666 100R
2666 4n7 50
6652 PRLL5819
2653 330p 50
6653 BZM55-C8V2
2672 100n 25
2608 1n 25
2665 470p 50
3639 1K
HOT GROUND
HOT BORDER
3122 123 6011.3
CL 26532055_005.eps
040703

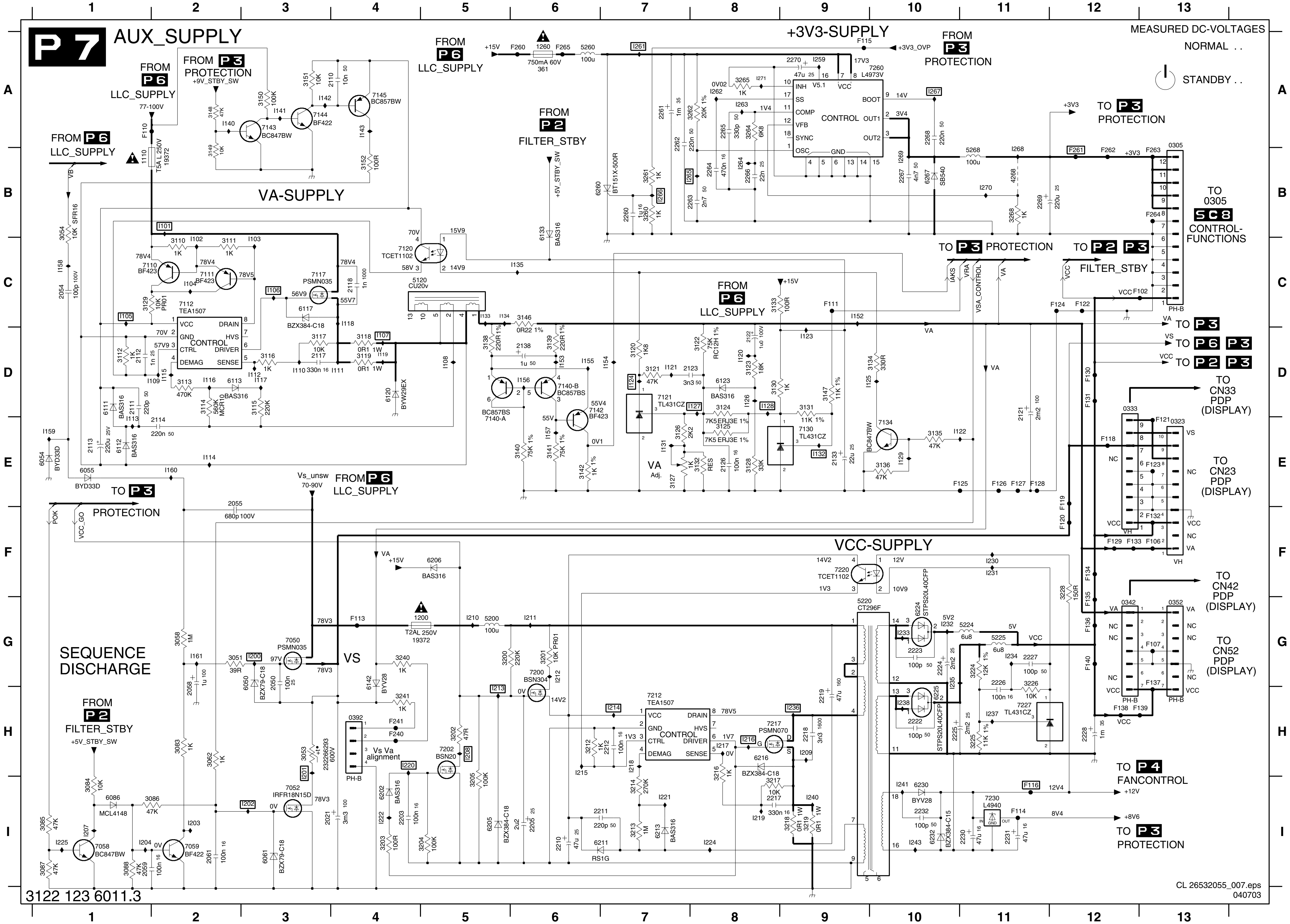
| | | | |
|---|---|---|---|
| 2600 | B3 | I622 | G7 |
| 2601 | B2 | I623 | G8 |
| 2605 | C3 | I624 | H9 |
| 2608 | H8 | I625 | G10 |
| 2610 | C7 | I626 | H11 |
| 2611 | B8 | I627 | G12 |
| 2612 | C6 | I628 | G12 |
| 2613 | C6 | I629 | H12 |
| 2616 | C9 | I630 | C8 |
| 2617 | C9 | I631 | E6 |
| 2640 | H9 | I632 | E7 |
| 2641 | H9 | I633 | H2 |
| 2642 | G11 | I634 | B6 |
| 2651 | H4 | I635 | C7 |
| 2652 | H3 | I636 | H12 |
| 2653 | H5 | I637 | E9 |
| 2654 | H1 | | |
| 2655 | H3 | | |
| 2656 | H2 | | |
| 2662 | E10 | | |
| 2663 | E8 | | |
| 2664 | E8 | | |
| 2665 | H8 | | |
| 2666 | H4 | | |
| 2670 | I12 | | |
| 2671 | H12 | | |
| 2672 | H7 | | |
| 2673 | G12 | | |
| 2674 | G12 | | |
| 3608 | C5 | | |
| 3610 | C6 | | |
| 3611 | C7 | | |
| 3614 | C7 | | |
| 3615 | C8 | | |
| 3639 | H8 | | |
| 3640 | H9 | | |
| 3641 | G9 | | |
| 3642 | G10 | | |
| 3650 | G3 | | |
| 3651 | H3 | | |
| 3652 | H3 | | |
| 3653 | G5 | | |
| 3654 | H1 | | |
| 3655 | H1 | | |
| 3662 | E7 | | |
| 3663 | E7 | | |
| 3664 | H12 | | |
| 3665 | G8 | | |
| 3666 | H4 | | |
| 3667 | H6 | | |
| 3668 | F7 | | |
| 3670 | G12 | | |
| 3671 | H12 | | |
| 3673 | G12 | | |
| 3674 | H12 | | |
| 3675 | E9 | | |
| 3676 | E9 | | |
| 3999 | A11 | | |
| 5600 | B5 | | |
| 5612 | B7 | | |
| 6600 | B2 | | |
| 6605 | A3 | | |
| 6606 | A2 | | |
| 6608 | B6 | | |
| 6609 | C7 | | |
| 6611 | B8 | | |
| 6616 | C8 | | |
| 6640 | G10 | | |
| 6641 | H10 | | |
| 6642 | H11 | | |
| 6643 | H9 | | |
| 6651 | H4 | | |
| 6652 | H5 | | |
| 6653 | H5 | | |
| 6654 | H1 | | |
| 6660 | E8 | | |
| 6661 | E8 | | |
| 6663 | E9 | | |
| 6665 | E10 | | |
| 7608 | C6 | | |
| 7610 | C7 | | |
| 7640 | H10 | | |
| 7641 | G10 | | |
| 7650 | G6 | | |
| 7654 | H2 | | |
| 7660 | E9 | | |
| F600 | B10 | | |
| F601 | B3 | | |
| F604 | D10 | | |
| F605 | D10 | | |
| F606 | I10 | | |
| F608 | D11 | | |
| F609 | F9 | | |
| F610 | G9 | | |
| F996 | A10 | | |
| F997 | A10 | | |
| F998 | A11 | | |
| F999 | A11 | | |
| I603 | B5 | | |
| I604 | B7 | | |
| I605 | B5 | | |
| I606 | C6 | | |
| I607 | C7 | | |
| I608 | B7 | | |
| I609 | C8 | | |
| I610 | E6 | | |
| I611 | E7 | | |
| I612 | E8 | | |
| I613 | E8 | | |
| I614 | E9 | | |
| I615 | H1 | | |
| I616 | H3 | | |
| I617 | G2 | | |
| I618 | H4 | | |
| I619 | H4 | | |
| I620 | H5 | | |
| I621 | G4 | | |

# Power Supply Panel (FM24 AB): LLC Supply

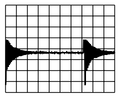
U13 E9
U14 E6
0204 G9
0302 G13
1000 H6
1001 H7
1002 H9
1003 H8
1004 B8
1005 F11
1041 B10
1042 C10
1043 C10
1044 D10
1045 F11
1084 G10
2000 G10
2001 C9
2002 B5
2003 B4
2004 C2
2005 D1
2006 C2
2007 F2
2008 F4
2009 E5
2010 F5
2011 E9
2012 D9
2013 C9
2014 F6
2015 F5
2016 E6
2017 C9
2020 D11
2022 G11
2023 E14
2024 E12
2025 E13
2026 G3
2027 E3
2028 D11
2029 F11
2030 F12
2032 D2
2033 D2
2034 E1
2035 E1
2036 D2
2038 D13
2040 D8
2041 B11
2042 C11
2043 C11
2044 D11
2045 F11
2046 C11
2047 D11
2048 E11
2049 E11
2090 B3
2290 H10
2291 G11
2292 H11
2293 H11
2294 H11
3003 C1
3004 D1
3005 C2
3006 D2
3007 F2
3008 F2
3009 F1
3010 E4
3011 E5
3012 F3
3013 F4
3014 C7
3015 C7
3016 C7
3017 D7
3018 E7
3019 E7
3020 F5
3021 F5
3022 E12
3023 E12
3024 E12
3025 F12
3026 F12
3027 F3
3028 F13
3029 E13
3030 F12
3031 F14
3032 F14
3033 D7
3034 F13
3037 D13
3038 D13
3039 D14
3040 E13
3041 F13
3042 D1
3043 D1
3044 D1
3045 E2
3046 E1
3047 E2
3048 D1
3049 D3
3050 F7
3056 E4
3057 D12
3064 F3
3065 E4
3066 F3
3067 F5
3070 E6
3071 F3
3075 B8
3076 C8
3077 D8
3078 E8
3080 D6
3081 D7
3090 A3
3091 B3
3092 A4
3093 B3
3095 A5
3096 A5
3097 B5
3292 H10
5001 C6
5002 C9
5003 B8
5004 E9
5290 G10
5291 H12
5292 H12
5293 G12
6004 D6
6005 D6
6007 C7
6008 D7
6009 F5
6010 F4
6011 F4
6012 E8
6013 C8
6018 C8
6019 E7
6021 F11
6022 D7
6023 E13
6027 C7
6028 E7
6031 D2
6032 E2
6033 E2
6034 D2
6035 D2
6041 B11
6042 D13
6043 C12
6044 D11
6045 F11
6046 D11
6047 E11
6075 B8
6077 D8
6095 A5
6291 H11
7001 C3
7002 B9
7003 A9
7005 C8
7006 D8
7007 C7
7008 E7
7009 E5
7010 E12
7011 F13
7017 F3
7018 F3
7020 C8
7021 E8
7022 D7
7042 D13
7090 A3
7091 B4
7092 A4
7093 A5
9043 C12
9044 C11
F001 A5
F002 C8
F003 C6
F004 C6
F005 D9
F006 D8
F007 F3
F008 D6
F009 D6
F014 F12
F015 B13
F016 C13
F017 D10
F290 H13
F291 G13
F292 H13
F293 H12
F294 H12
F295 H13
F296 G13
F297 H12
F298 H12
I001 A4
I002 A4
I003 A5
I004 B5
I005 B4
I006 B3
I007 C2
I008 C2
I009 C2
I010 D2
I011 D2
I012 D4
I013 D3
I014 E1
I015 E2
I016 E3
I017 E2
I018 E3
I019 E1
I020 E3
I021 E1
I022 F2
I023 F3
I024 F4
I025 F2
I026 F2
I027 C3
I028 G2
I029 G2
I030 E5
I031 E4
I032 E5
I033 F4
I034 F5
I035 F5
I036 F5
I037 C7
I038 C7
I039 C7
I040 B8
I041 B8
I042 C7
I043 C7
I044 C8
I045 C6
I046 C7
I047 D7
I048 D6
I049 D8
I050 D7
I051 E7
I052 E7
I053 E7
I054 E7
I055 E8
I056 B4
I057 D8
I058 C11
I059 E7
I060 A10
I061 A10
I062 B10
I063 B10
I064 B9
I065 B11
I066 B9
I067 B10
I068 C11
I069 C10
I070 D11
I071 C10
I072 E11
I073 F11
I074 F11
I075 D13
I076 F11
I077 F11
I078 D13
I079 D13
I080 G10
I081 F7
I082 F7
I083 F8
I084 F8
I085 E12
I086 D10
I087 D10
I088 E13
I089 E12
I090 F13
I091 F14
I092 F13
I093 F12
I094 F12
I097 E10
I098 H8
I099 C10
I290 G11
I291 H11
I292 H10
I293 H11


P6
LLC_SUPPLY
BIAS SUPPLY
FROM P2 FILTER_STBY
25V_HOT
SW25V_HOT
FROM P5 PRECONDITIONER
7093 LM317T
FROM P2 FILTER_STBY
+5V_STBY_SW
LATCH
TO P3 PROTECTION
FROM P2 FILTER_STBY
400V_HOT
VERKEERD COMPONENT
IS AANGEVRAAGD T3.15AE 250V
T2AE 250V 19196
7003 TCET1102
7002 TCET1102
VS-CONTROLLER
7001 MC34067P
CONTROL
VCC UVLO/ ENABLE
5.0 V REFERENCE
VARIABLE FREQUENCY OSCILLATOR
VREF UVLO
ONE-SHOT
STEERING FLIP-FLOP
ERROR
2.5V CLAMP
SOFT-START
FAULT DET/ LATCH
GND
HIGH SIDE DRIVE
LOW SIDE DRIVE
7005 STU16NB501
7006 STU16NB501
5001 CE136H
5002 CE423D
5004 CE423D
SOFTSTART CONTROL
CURRENT PROTECTION
TO P7 AUX_SUPPLY
77-100V
Vs_unsw
TO P3 P7
70-90V
FROM P7 AUX_SUPPLY
VS
VRS FEEDBACK
TO P3 PROTECTION
VRS
7010 TL431CZ
7011 TL431CZ
Vs Voltage Adj.
TO P7 AUX_SUPPLY
15V
+15V
DC_PROT
TO 0302 A7 SUPPLY & DC PROTECTION
+9V_STBY
VSND_POS
GND_SND
VSND_NEG
6291 D4SBL20U
0302 PH-B
MEASURED DC-VOLTAGES
NORMAL . .
STANDBY ( . . . )
SHIELDING 3.3
HEATSINK
F003 5V / div DC 20µs / div
F005 200V / div DC 5µs / div
I007 2V / div DC 2µs / div
I083 100V / div DC 5µs / div
F004 5V / div DC 2µs / div
F038 200V / div DC 2µs / div
I057 5V / div DC 2µs / div
F014 = 2V4
F293 = 14V
F294 = -14V5
F801 = 17V
F815 = 78V
F816 = 78V
I027 = 2V6
I085 = 13V4
I090 = 4V2
I091 = 2V4
HOT GROUND
HOT
COLD
COLD GROUND
3122 123 6011.3
CL 26532055_006.eps 040703

## Power Supply Panel (FM24 AB): Aux Supply

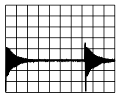

P7
AUX_SUPPLY
VA-SUPPLY
+3V3-SUPPLY
VCC-SUPPLY
SEQUENCE DISCHARGE
VS
MEASURED DC-VOLTAGES
NORMAL . .
STANDBY . .
FROM P6 LLC_SUPPLY
FROM P3 PROTECTION
FROM P2 FILTER_STBY
TO P3 PROTECTION
TO P2 P3 FILTER_STBY
TO 0305 SC8 CONTROL-FUNCTIONS
TO P3
TO P6 P3
TO P2 P3
TO CN33 PDP (DISPLAY)
TO CN23 PDP (DISPLAY)
TO CN42 PDP (DISPLAY)
TO CN52 PDP (DISPLAY)
TO P4 FANCONTROL
Vs Va alignment
3122 123 6011.3
CL 26532055_007.eps
040703

I105



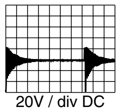
20V / div DC
20µs / div

I106



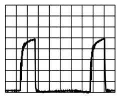
20V / div DC
20µs / div

I107



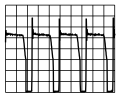
20V / div DC
20µs / div

I216



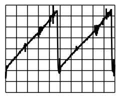
2V / div DC
2µs / div

I236



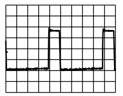
20V / div DC
5µs / div

I265



500 mV / div DC
2µs / div

I267



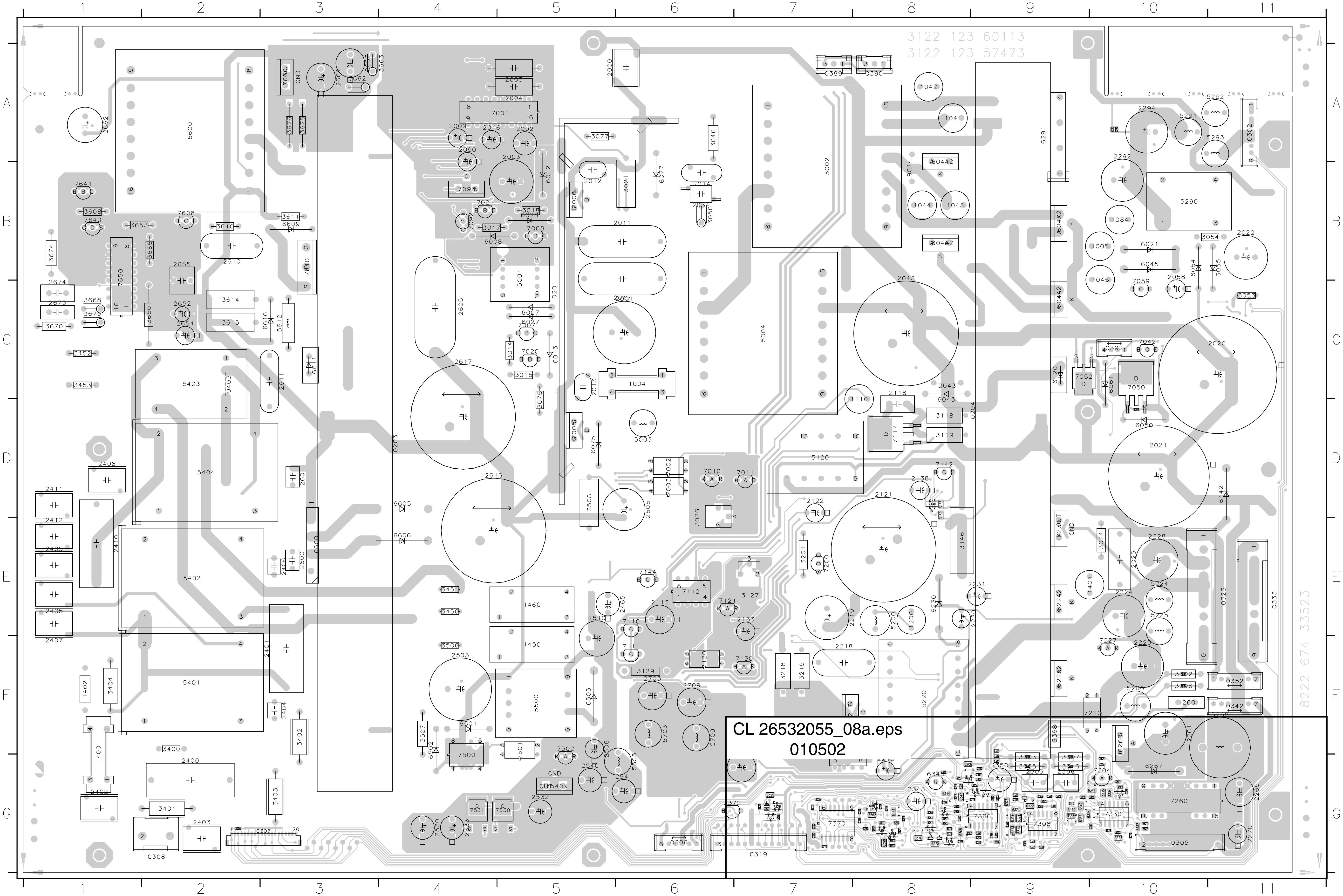
5 V / div DC
2µs / div

F116 = 12V4
F261 = 3V3
I101 = 76V
I124 = 10V6
I127 = 2V8
I128 = 3V9
I132 = 2V6
I200 = 97V

I201 = 78V3
I202 = 0V
I208 = 0V
I213 = 0V
I214 = 14V2
I220 = 9V
I261 = 17V3
I266 = 0V

0305 A13
0323 E13
0333 D12
0342 G12
0352 G13
0392 H4
1110 B1
1200 G5
1260 A6
2021 I3
2050 G3
2054 C1
2055 E2
2058 H2
2059 I1
2061 I2
2110 A4
2111 D1
2112 D1
2113 E1
2114 E2
2117 D3
2118 C4
2121 D11
2122 D8
2123 D8
2126 E8
2133 E9
2138 D6
2203 I4
2205 I6
2210 I6
2211 I7
2212 H7
2217 I8
2218 H9
2219 H9
2222 H10
2223 G10
2224 G10
2225 H10
2226 G11
2227 G11
2228 H12
2230 I11
2231 I11
2232 I10
2260 B7
2261 A7
2262 A7
2263 B8
2264 B8
2265 A8
2266 B8
2267 B10
2268 A10
2269 B11
2270 A9
3051 G2
3053 H3
3054 B1
3058 G2
3062 H2
3083 H2
3084 I1
3085 I1
3086 I2
3087 I1
3088 I1
3110 C2
3111 C2
3112 D1
3113 D2
3114 D2
3115 D3
3116 D3
3117 D3
3118 D4
3119 D4
3120 D7
3121 D7
3122 D8
3123 D8
3124 D8
3125 E8
3126 E7
3127 E7
3128 E8
3129 C1
3130 D8
3131 D9
3132 E8
3133 C8
3134 D10
3135 E10
3136 E10
3138 D5
3139 D6
3140 E6
3141 E6
3142 E6
3146 C6
3147 D9
3148 A2
3149 B2
3150 A3
3151 A3
3152 B4
3200 G5
3201 G6
3202 H5
3203 I4
3204 I5
3205 I5
3212 H6
3213 I7
3214 I7
3216 H8
3217 I8
3218 I9
3219 I9
3224 G11
3225 H11
3226 G11
3228 F12
3240 G4
3241 H4
3260 B7
3261 B7
3262 A8
3264 A8
3265 A8
3268 B11
4268 B11
5120 C5
5200 G5
5220 G9
5224 G11
5225 G11
5260 A6
5268 B11
6050 G3
6054 E1
6055 E1
6061 I3
6086 I1
6111 D1
6112 E1
6113 D2
6117 C3
6120 D4
6123 D8
6133 B6
6142 G4
6202 I4
6205 I5
6206 F5
6211 I7
6213 I7
6216 H8
6224 G10
6225 H10
6230 I10
6232 I10
6260 B6
6267 B10
7050 G3
7052 I3
7058 I1
7059 I2
7110 C2
7111 C2
7112 C2
7117 C3
7120 C4
7121 D7
7130 E9
7134 E10
7140-A D5
7140-B D6
7142 D6
7143 A3
7144 A3
7145 A4
7200 G6
7202 H5
7212 H7
7217 H8
7220 F9
7227 H11
7230 I11
7260 A10
F102 C13
F106 F13
F107 G13
F110 A1
F111 C9
F113 G4
F114 I11
F115 A9
F116 I11
F118 E12
F119 E12
F120 F12
F121 E13
F122 C12
F123 E13
F124 C12
F125 E11
F126 E11
F127 E11
F128 E11
F129 F12
F130 D12
F131 D12
F132 F13
F133 F12
F134 F12
F135 G12
F136 G12
F137 G13
F138 H12
F139 H13
F140 G12
F240 H4
F241 H4
F260 A6
F261 B12
F262 B12
F263 B13
F264 B13
F265 A6
I101 B2
I102 C2
I103 C3
I104 C2
I105 C1
I106 C3
I107 D4
I108 D5
I109 D2
I110 D3
I111 D4
I112 D3
I113 E1
I114 E2
I115 D2
I116 D2
I117 D3
I118 C4
I119 D4
I120 D8
I121 D7
I122 E11
I123 D9
I124 D7
I125 D9
I126 D8
I127 D8
I128 D8
I129 E10
I131 E7
I132 E9
I133 C5
I134 C5
I135 C6
I140 A2
I141 A3
I142 A3
I143 A4
I152 C9
I153 D6
I154 D7
I155 D6
I156 D6
I157 E6
I158 C1
I159 E1
I160 E2
I161 G2
I200 G3
I201 H3
I202 I3
I203 I2
I204 I1
I207 I1
I208 H5
I209 H9
I210 G5
I211 G6
I212 G6
I213 H5
I214 H7
I215 H6
I216 H8
I217 H8
I218 H7
I219 I8
I220 H4
I221 I7
I222 I4
I224 I8
I225 I1
I230 F11
I231 F11
I232 G10
I233 G10
I234 G11
I235 G10
I236 H9
I237 H11
I238 H10
I240 I9
I241 I10
I243 I10
I259 A9
I261 A7
I262 A8
I263 A8
I264 B8
I265 B7
I266 B7
I267 A10
I268 B11
I269 B10
I270 B11
I271 A8

## Layout Power Supply Panel (FM24 AB) (Top Side)

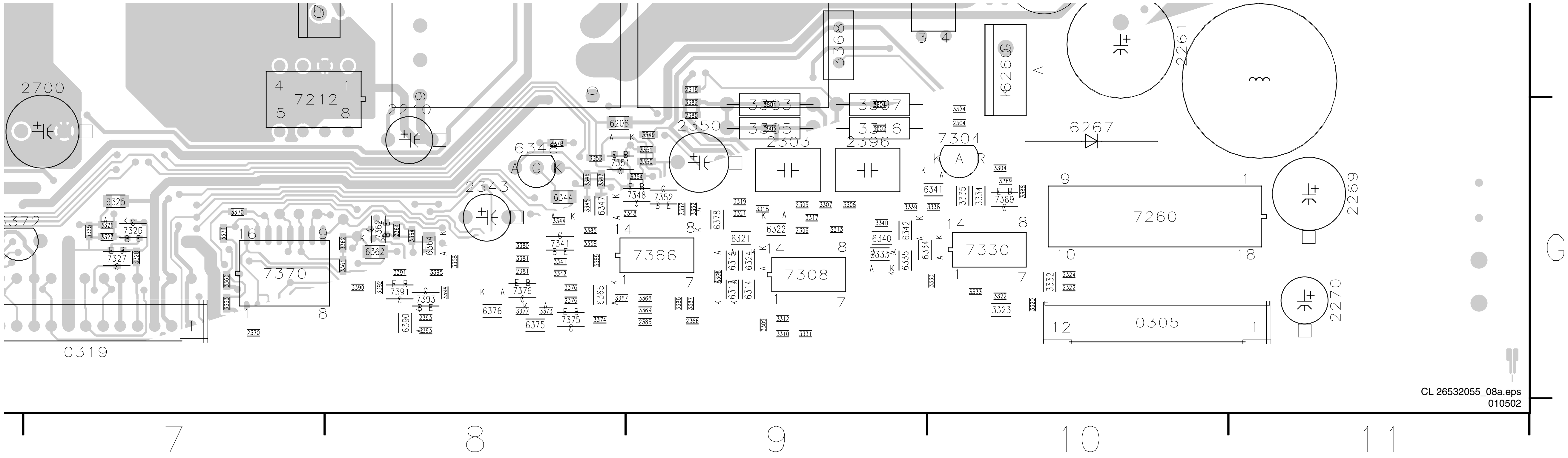

1
2
3
4
5
6
7
8
9
10
11
A
B
C
D
E
F
G
3122 123 60113
3122 123 57473
8222 674 33523
5600
5002
5004
5290
5120
5403
5404
5402
5401
5500
5220
6291
1460
1450
1004
2617
2616
2043
2121
2020
2021
2605
7260
7370
7366
7308
7330
7500
7001
5001
0319
0305
0306
0307
0308
0323
0333
0352
0342
0389
0390
GND
CL 26532055_08a.eps
010502

3122 123 6011.3

CL 26532055_008.eps
240603

# Layout Power Supply Panel (FM24 AB) ( Part 1 Top Side)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0201 | C5 | 2001 | C6 | 2230 | E9 | 2406 | E3 | 2703 | F6 | 3309 | G9 | 3349 | G9 | 3389 | G10 | 3673 | C1 | 5612 | C3 | 6314 | G9 | 7005 | D5 | 7326 | G7 |
| 0203 | D4 | 2002 | A5 | 2231 | E9 | 2407 | F1 | 2709 | F6 | 3310 | G9 | 3350 | G9 | 3390 | G8 | 3674 | B1 | 5703 | F6 | 6321 | G9 | 7006 | B5 | 7327 | G7 |
| 0204 | D9 | 2003 | A5 | 2261 | F10 | 2408 | D1 | 3014 | C5 | 3312 | G9 | 3351 | G9 | 3391 | G8 | 3675 | A3 | 5709 | F6 | 6322 | G9 | 7007 | C5 | 7330 | G10 |
| 0302 | A11 | 2004 | A5 | 2269 | G11 | 2409 | E1 | 3015 | C5 | 3313 | G9 | 3352 | G9 | 3392 | G8 | 3676 | A3 | 6007 | C5 | 6324 | G9 | 7008 | B5 | 7341 | G8 |
| 0305 | G10 | 2005 | A5 | 2270 | G11 | 2410 | E1 | 3017 | B4 | 3316 | G9 | 3353 | G8 | 3393 | G8 | 3800 | F10 | 6008 | B4 | 6325 | G7 | 7010 | D6 | 7348 | G9 |
| 0306 | G6 | 2009 | A4 | 2290 | A10 | 2411 | D1 | 3018 | B5 | 3317 | G9 | 3354 | G9 | 3394 | G8 | 3801 | G9 | 6012 | B5 | 6333 | G9 | 7011 | D7 | 7351 | G8 |
| 0307 | G3 | 2011 | B6 | 2292 | A10 | 2412 | E1 | 3021 | B6 | 3318 | G9 | 3358 | G8 | 3395 | G8 | 3802 | G9 | 6013 | C5 | 6334 | G9 | 7020 | C5 | 7352 | G9 |
| 0308 | G2 | 2012 | B5 | 2294 | A10 | 2465 | E6 | 3024 | E10 | 3319 | G9 | 3359 | G8 | 3396 | F10 | 3803 | F10 | 6021 | B10 | 6335 | G9 | 7021 | B4 | 7362 | G8 |
| 0319 | G7 | 2013 | C5 | 2303 | G9 | 2503 | F4 | 3026 | E6 | 3320 | G10 | 3360 | G7 | 3397 | G9 | 3804 | G9 | 6027 | C5 | 6340 | G9 | 7042 | C10 | 7366 | G9 |
| 0323 | E11 | 2014 | B6 | 2304 | G10 | 2505 | D6 | 3046 | A6 | 3321 | G9 | 3361 | G8 | 3400 | F2 | 3805 | G9 | 6028 | B5 | 6341 | G10 | 7050 | C10 | 7370 | G7 |
| 0333 | E11 | 2016 | A4 | 2305 | G9 | 2508 | F5 | 3050 | B6 | 3322 | G10 | 3362 | G8 | 3401 | G2 | 4300 | G2 | 6041 | B8 | 6342 | G9 | 7052 | C9 | 7375 | G8 |
| 0342 | F11 | 2017 | C6 | 2306 | G9 | 2510 | E5 | 3053 | C11 | 3323 | G10 | 3363 | G7 | 3402 | F3 | 5001 | B5 | 6043 | D8 | 6344 | G8 | 7059 | C10 | 7376 | G8 |
| 0352 | F11 | 2020 | C11 | 2316 | F9 | 2530 | G4 | 3054 | B11 | 3324 | G10 | 3364 | G8 | 3403 | G3 | 5002 | B7 | 6044 | C9 | 6347 | G8 | 7092 | B4 | 7389 | G10 |
| 0389 | A7 | 2021 | D10 | 2322 | G10 | 2532 | G5 | 3075 | D5 | 3325 | G7 | 3365 | G8 | 3404 | F1 | 5003 | D6 | 6045 | B10 | 6348 | G8 | 7093 | B4 | 7391 | G8 |
| 0390 | A8 | 2022 | B11 | 2324 | G10 | 2533 | G4 | 3077 | A5 | 3326 | G7 | 3366 | G9 | 3450 | E4 | 5004 | C7 | 6046 | B8 | 6362 | G8 | 7110 | E6 | 7393 | G8 |
| 0392 | C10 | 2025 | E10 | 2343 | G8 | 2540 | G5 | 3118 | D8 | 3327 | G7 | 3367 | G8 | 3451 | E4 | 5120 | D7 | 6047 | B9 | 6364 | G8 | 7111 | F6 | 7500 | G4 |
| 1004 | C6 | 2034 | B6 | 2350 | G9 | 2541 | G6 | 3119 | D8 | 3328 | G7 | 3368 | F9 | 3452 | C1 | 5200 | E8 | 6050 | D10 | 6365 | G8 | 7112 | E6 | 7501 | F5 |
| 1005 | B10 | 2043 | B8 | 2352 | G9 | 2600 | E3 | 3127 | E7 | 3330 | G10 | 3369 | G9 | 3453 | C1 | 5220 | F8 | 6054 | B10 | 6375 | G8 | 7117 | D8 | 7502 | F5 |
| 1041 | A8 | 2050 | D10 | 2364 | G8 | 2601 | D3 | 3129 | F6 | 3331 | G9 | 3370 | G7 | 3506 | F4 | 5224 | E10 | 6055 | B11 | 6376 | G8 | 7120 | F6 | 7530 | G5 |
| 1042 | A8 | 2058 | B10 | 2366 | G9 | 2605 | C4 | 3138 | D8 | 3332 | G10 | 3371 | G7 | 3507 | F4 | 5225 | E10 | 6061 | C10 | 6378 | G9 | 7121 | E6 | 7531 | G4 |
| 1043 | B8 | 2090 | A4 | 2370 | G7 | 2610 | B2 | 3139 | D8 | 3333 | G10 | 3372 | G6 | 3508 | D5 | 5260 | F10 | 6075 | D5 | 6390 | G8 | 7130 | F7 | 7540 | G5 |
| 1044 | B8 | 2113 | E6 | 2376 | G8 | 2611 | C3 | 3146 | E8 | 3334 | G10 | 3373 | G8 | 3608 | B1 | 5268 | F11 | 6077 | B6 | 6501 | F4 | 7140 | D8 | 7608 | B2 |
| 1045 | B10 | 2118 | C8 | 2380 | G9 | 2616 | D4 | 3201 | E7 | 3335 | G10 | 3374 | G8 | 3610 | B2 | 5290 | B10 | 6120 | C9 | 6502 | F4 | 7142 | D8 | 7610 | B3 |
| 1084 | B10 | 2121 | D8 | 2381 | G8 | 2617 | C4 | 3218 | F7 | 3338 | G10 | 3376 | G8 | 3611 | B3 | 5291 | A10 | 6142 | D11 | 6505 | F5 | 7144 | E6 | 7640 | B1 |
| 1110 | D8 | 2122 | D7 | 2385 | G9 | 2652 | C2 | 3219 | F7 | 3339 | G9 | 3377 | G8 | 3614 | C2 | 5292 | A11 | 6206 | G8 | 6600 | E3 | 7200 | E7 | 7641 | B1 |
| 1200 | E8 | 2133 | E7 | 2393 | G8 | 2654 | C2 | 3292 | A10 | 3340 | G9 | 3378 | G8 | 3615 | C2 | 5293 | A11 | 6224 | E9 | 6605 | D4 | 7212 | G7 | 7650 | B1 |
| 1260 | F10 | 2138 | D8 | 2396 | G9 | 2655 | B2 | 3302 | F10 | 3341 | G8 | 3380 | G8 | 3650 | C2 | 5401 | F2 | 6225 | F9 | 6606 | E4 | 7217 | F7 | 7660 | A3 |
| 1400 | G1 | 2210 | G8 | 2400 | G2 | 2662 | A1 | 3303 | G9 | 3342 | G8 | 3381 | G8 | 3653 | B1 | 5402 | E2 | 6230 | E8 | 6609 | B3 | 7220 | F10 | 9043 | C8 |
| 1401 | E10 | 2218 | F7 | 2401 | F3 | 2663 | A3 | 3304 | G10 | 3344 | G8 | 3382 | G9 | 3662 | A3 | 5403 | C2 | 6260 | F10 | 6611 | C3 | 7227 | F10 | 9044 | B8 |
| 1402 | F1 | 2219 | E7 | 2402 | G1 | 2664 | A3 | 3305 | G9 | 3345 | G8 | 3385 | G8 | 3663 | A4 | 5404 | D2 | 6267 | G10 | 6616 | C3 | 7230 | E9 | 9403 | C2 |
| 1450 | F5 | 2224 | E10 | 2403 | G2 | 2673 | C1 | 3306 | G9 | 3346 | G8 | 3386 | G9 | 3666 | B2 | 5500 | F5 | 6291 | A9 | 7001 | A5 | 7260 | G10 | | |
| 1460 | E5 | 2225 | F10 | 2404 | F3 | 2674 | C1 | 3307 | G9 | 3347 | G8 | 3387 | G9 | 3668 | C1 | 5505 | G6 | 6312 | G9 | 7002 | D6 | 7304 | G10 | | |
| 2000 | A5 | 2228 | E10 | 2405 | E1 | 2700 | F7 | 3308 | G9 | 3348 | G9 | 3388 | G10 | 3670 | C1 | 5600 | A2 | 6313 | G9 | 7003 | D6 | 7308 | G9 | | |



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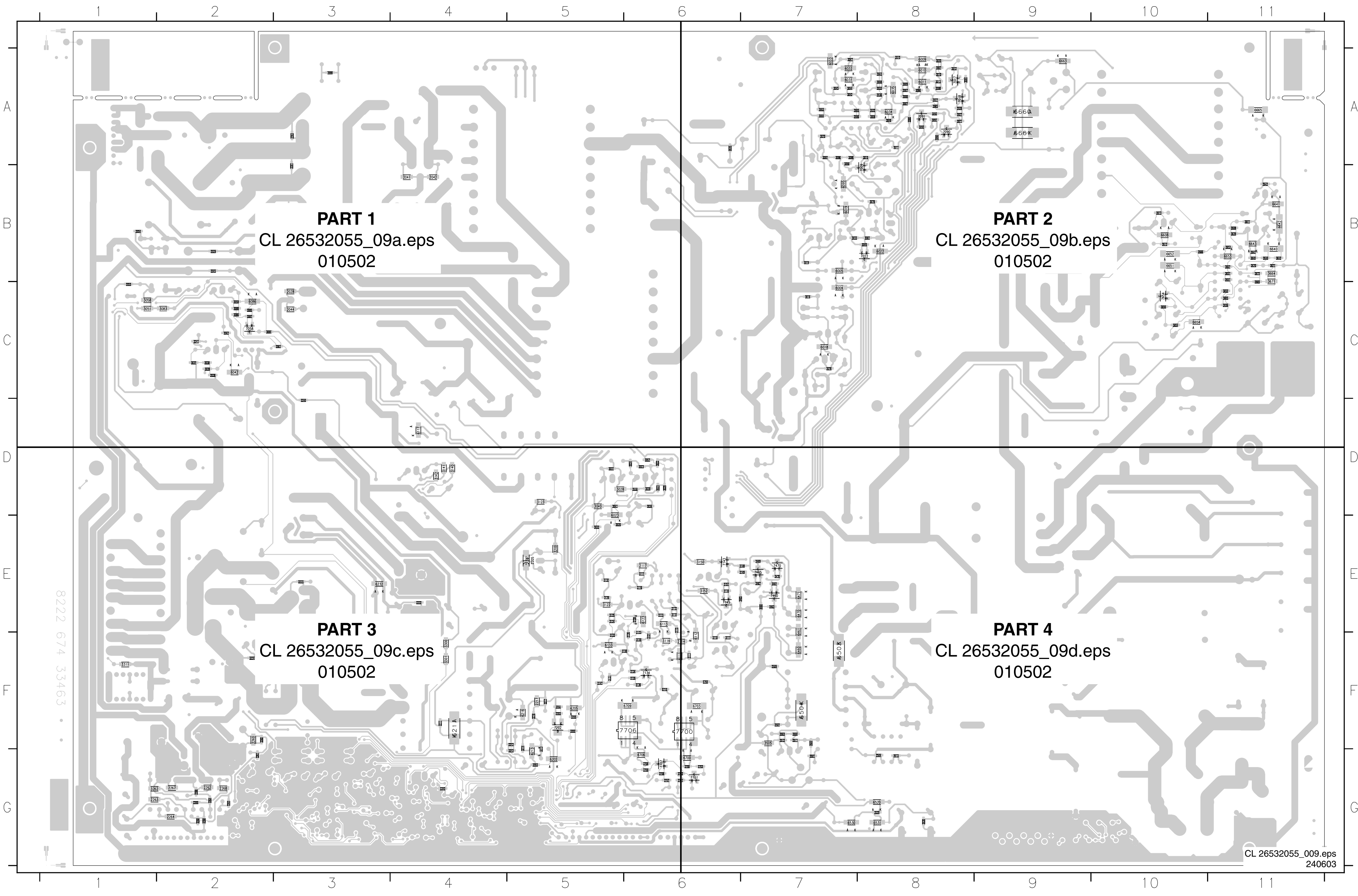
010502

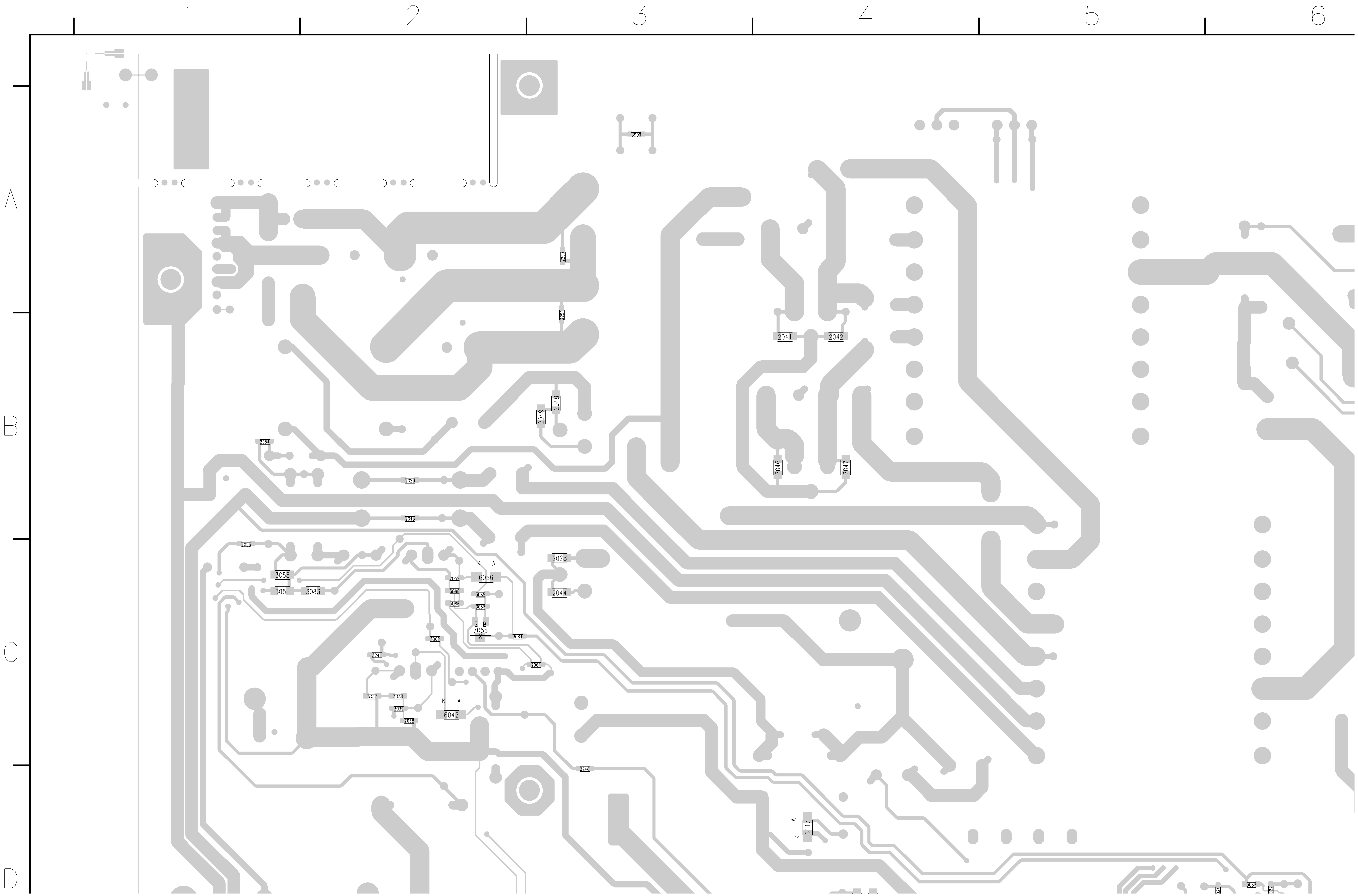
## Layout Power Supply Panel (FM24 AB) (Overview Bottom Side)

| | |
|---|---|
| 2006 | A7 |
| 2007 | A8 |
| 2008 | A8 |
| 2010 | A8 |
| 2015 | A8 |
| 2023 | D6 |
| 2024 | D6 |
| 2026 | A8 |
| 2027 | A8 |
| 2028 | C3 |
| 2029 | B2 |
| 2030 | D6 |
| 2032 | A8 |
| 2033 | A8 |
| 2035 | A6 |
| 2036 | A8 |
| 2038 | C2 |
| 2040 | B8 |
| 2041 | B4 |
| 2042 | B4 |
| 2044 | C3 |
| 2045 | B2 |
| 2046 | B4 |
| 2047 | B4 |
| 2048 | B3 |
| 2049 | B3 |
| 2054 | B1 |
| 2055 | C1 |
| 2059 | C2 |
| 2061 | C3 |
| 2110 | E6 |
| 2111 | F6 |
| 2112 | E6 |
| 2114 | F6 |
| 2117 | E6 |
| 2123 | F6 |
| 2126 | F6 |
| 2203 | F5 |
| 2205 | E5 |
| 2211 | F4 |
| 2212 | F5 |
| 2217 | F5 |
| 2222 | F3 |
| 2223 | E3 |
| 2226 | F2 |
| 2227 | F2 |
| 2232 | E4 |
| 2260 | F2 |
| 2262 | G2 |
| 2263 | G1 |
| 2264 | G2 |
| 2265 | G2 |
| 2266 | G2 |
| 2267 | G2 |
| 2268 | G2 |
| 2291 | B3 |
| 2293 | A3 |
| 2504 | G8 |
| 2507 | F7 |
| 2509 | F7 |
| 2511 | F7 |
| 2512 | F7 |
| 2513 | G8 |
| 2608 | B11 |
| 2612 | B10 |
| 2613 | B10 |
| 2640 | B11 |
| 2641 | B11 |
| 2642 | B11 |
| 2651 | B11 |
| 2653 | B11 |
| 2656 | C11 |
| 2665 | C11 |
| 2666 | B10 |
| 2670 | B11 |
| 2671 | B11 |
| 2672 | B11 |
| 3003 | A7 |
| 3004 | A7 |
| 3005 | A7 |
| 3006 | A8 |
| 3007 | A8 |
| 3008 | A8 |
| 3009 | A8 |
| 3010 | A8 |
| 3011 | A8 |
| 3012 | A8 |
| 3013 | A8 |
| 3016 | C7 |
| 3019 | B7 |
| 3020 | A8 |
| 3022 | D6 |
| 3023 | D6 |
| 3025 | E5 |
| 3027 | A8 |
| 3028 | D5 |
| 3029 | D6 |
| 3030 | D6 |
| 3031 | D5 |
| 3032 | E5 |
| 3033 | B7 |
| 3034 | D6 |
| 3037 | C2 |
| 3038 | C2 |
| 3039 | C2 |
| 3040 | D5 |
| 3041 | D5 |
| 3042 | A7 |
| 3043 | A8 |
| 3044 | A7 |
| 3045 | A7 |
| 3047 | A7 |
| 3048 | A8 |
| 3049 | A8 |
| 3051 | C1 |
| 3056 | A7 |
| 3057 | D6 |
| 3058 | C1 |
| 3062 | C2 |
| 3064 | A8 |
| 3065 | A8 |
| 3066 | A8 |
| 3067 | A8 |
| 3070 | A7 |
| 3071 | A8 |
| 3076 | C7 |
| 3078 | B8 |
| 3080 | A8 |
| 3081 | B8 |
| 3083 | C2 |
| 3084 | C2 |
| 3085 | C2 |
| 3086 | C2 |
| 3087 | C2 |
| 3088 | C2 |
| 3090 | A8 |
| 3091 | A8 |
| 3092 | A8 |
| 3093 | A8 |
| 3095 | A7 |
| 3096 | A7 |
| 3097 | A7 |
| 3110 | F6 |
| 3111 | F6 |
| 3112 | E6 |
| 3113 | E6 |
| 3114 | F6 |
| 3115 | E6 |
| 3116 | E6 |
| 3117 | E6 |
| 3120 | F6 |
| 3121 | F6 |
| 3122 | E5 |
| 3123 | D5 |
| 3124 | E5 |
| 3125 | E5 |
| 3126 | E5 |
| 3128 | E6 |
| 3130 | F6 |
| 3131 | F5 |
| 3132 | E5 |
| 3133 | F5 |
| 3134 | F6 |
| 3135 | F6 |
| 3136 | F6 |
| 3140 | D4 |
| 3141 | D4 |
| 3142 | D4 |
| 3147 | F5 |
| 3148 | E7 |
| 3149 | E7 |
| 3150 | E6 |
| 3151 | E6 |
| 3152 | E6 |
| 3200 | E5 |
| 3202 | F5 |
| 3203 | G5 |
| 3204 | F5 |
| 3205 | F5 |
| 3212 | G5 |
| 3213 | G5 |
| 3214 | F5 |
| 3216 | F5 |
| 3217 | F5 |
| 3224 | F2 |
| 3225 | F2 |
| 3226 | F2 |
| 3228 | F3 |
| 3240 | D3 |
| 3241 | C2 |
| 3260 | F2 |
| 3261 | G2 |
| 3262 | G1 |
| 3264 | G2 |
| 3265 | G2 |
| 3268 | G2 |
| 3300 | F4 |
| 3301 | F4 |
| 3311 | F1 |
| 3343 | G4 |
| 3460 | E7 |
| 3461 | E7 |
| 3463 | E7 |
| 3465 | E6 |
| 3467 | E7 |
| 3469 | E7 |
| 3470 | E7 |
| 3501 | G7 |
| 3502 | F7 |
| 3503 | F7 |
| 3504 | F7 |
| 3505 | F7 |
| 3520 | G8 |
| 3530 | G8 |
| 3639 | B11 |
| 3640 | B11 |
| 3641 | B11 |
| 3642 | B11 |
| 3651 | B11 |
| 3652 | C11 |
| 3654 | C10 |
| 3655 | C10 |
| 3664 | B11 |
| 3665 | C11 |
| 3667 | B11 |
| 3671 | B11 |
| 3700 | G6 |
| 3701 | G6 |
| 3702 | G6 |
| 3703 | G6 |
| 3706 | G6 |
| 3707 | G6 |
| 3708 | G6 |
| 3709 | G6 |
| 3999 | A3 |
| 4268 | G2 |
| 5704 | F6 |
| 5710 | F6 |
| 6004 | C7 |
| 6005 | B7 |
| 6009 | A8 |
| 6010 | A8 |
| 6011 | A8 |
| 6018 | C7 |
| 6019 | B7 |
| 6022 | B8 |
| 6023 | E5 |
| 6031 | A7 |
| 6032 | A7 |
| 6033 | A7 |
| 6034 | A8 |
| 6035 | A8 |
| 6042 | C2 |
| 6086 | C2 |
| 6095 | B7 |
| 6111 | F6 |
| 6112 | F6 |
| 6113 | E6 |
| 6117 | D4 |
| 6123 | E6 |
| 6133 | F5 |
| 6202 | G5 |
| 6205 | F5 |
| 6211 | F4 |
| 6213 | G5 |
| 6216 | F5 |
| 6232 | E3 |
| 6460 | F7 |
| 6461 | E7 |
| 6470 | E7 |
| 6471 | E7 |
| 6503 | F7 |
| 6504 | F7 |
| 6510 | F9 |
| 6511 | F9 |
| 6512 | F9 |
| 6513 | F9 |
| 6520 | G8 |
| 6530 | G7 |
| 6531 | G8 |
| 6608 | B10 |
| 6640 | B11 |
| 6641 | B11 |
| 6642 | B11 |
| 6643 | B11 |
| 6651 | B10 |
| 6652 | B10 |
| 6653 | B11 |
| 6654 | C10 |
| 6660 | A9 |
| 6661 | A9 |
| 6663 | A9 |
| 6665 | A11 |
| 6700 | G6 |
| 6703 | F6 |
| 6706 | G6 |
| 6709 | F6 |
| 7009 | B8 |
| 7017 | A8 |
| 7018 | A8 |
| 7022 | B8 |
| 7058 | C2 |
| 7090 | A8 |
| 7091 | A8 |
| 7134 | F6 |
| 7143 | E6 |
| 7145 | E6 |
| 7202 | F5 |
| 7460 | E7 |
| 7465 | E7 |
| 7470 | E7 |
| 7654 | C10 |
| 7700 | F6 |
| 7701 | G6 |
| 7706 | F6 |
| 7707 | G6 |



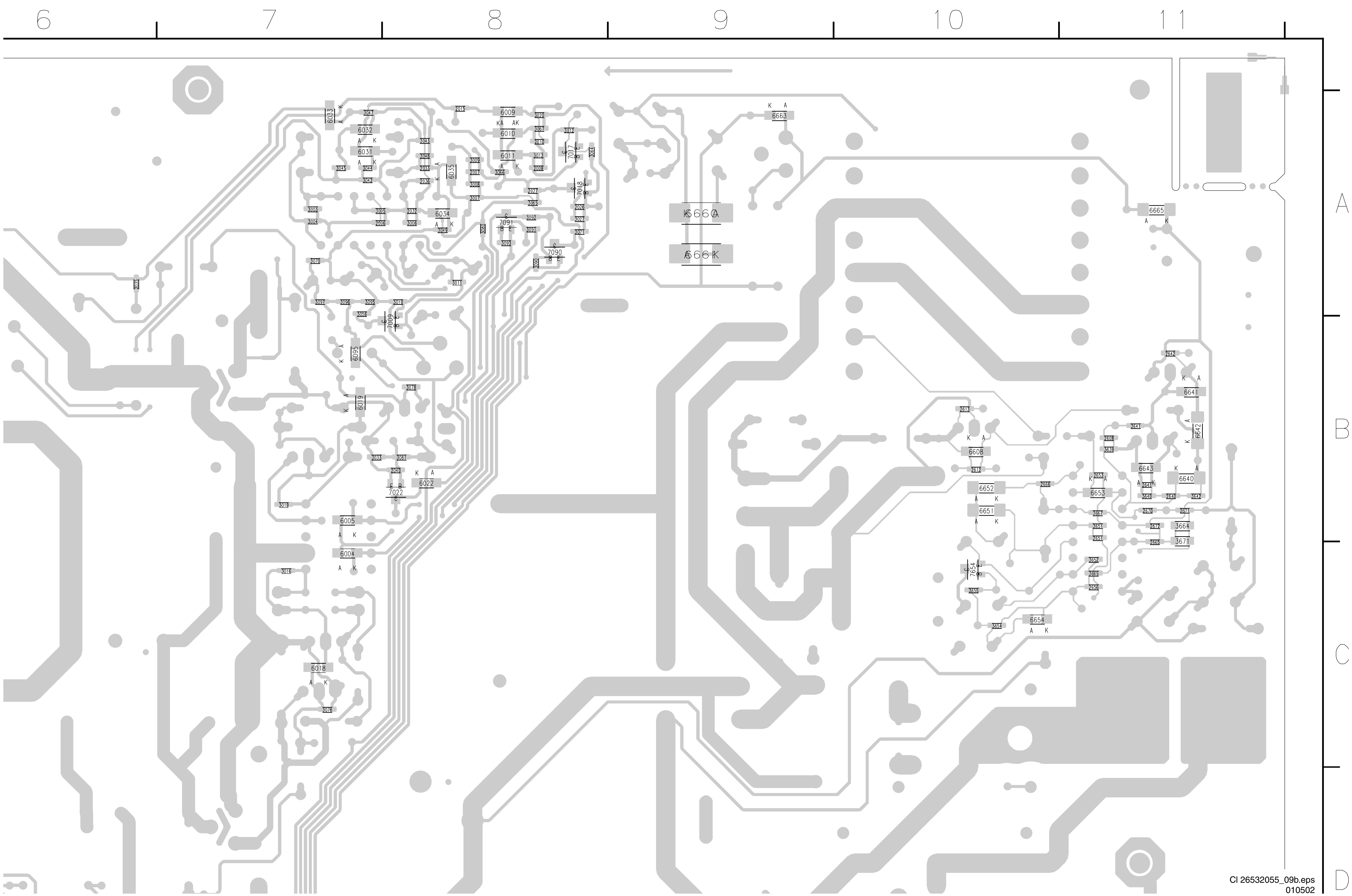
3122 123 6011.3

## Layout Power Supply Panel (FM24 AB) (Part 1 Bottom Side)


1
2
3
4
5
6
A
B
C
D
2041
2042
2049
2048
2046
2047
2028
2044
3058
3051
3083
K A
6086
7058
K A
6042
A
K
6117

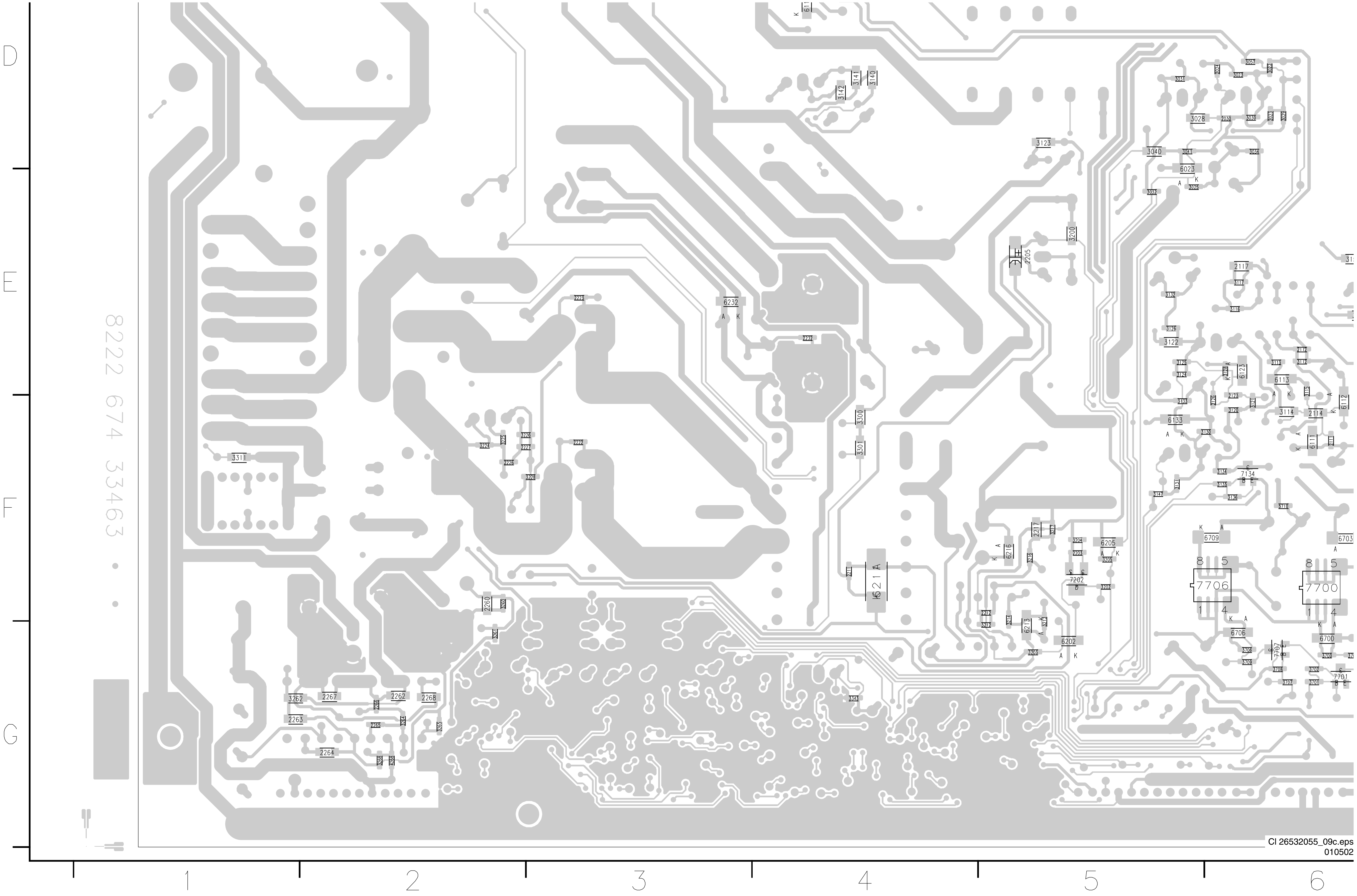
CI 26532055_09a.eps
010502

## Layout Power Supply Panel (FM24 AB) (Part 2 Bottom Side)

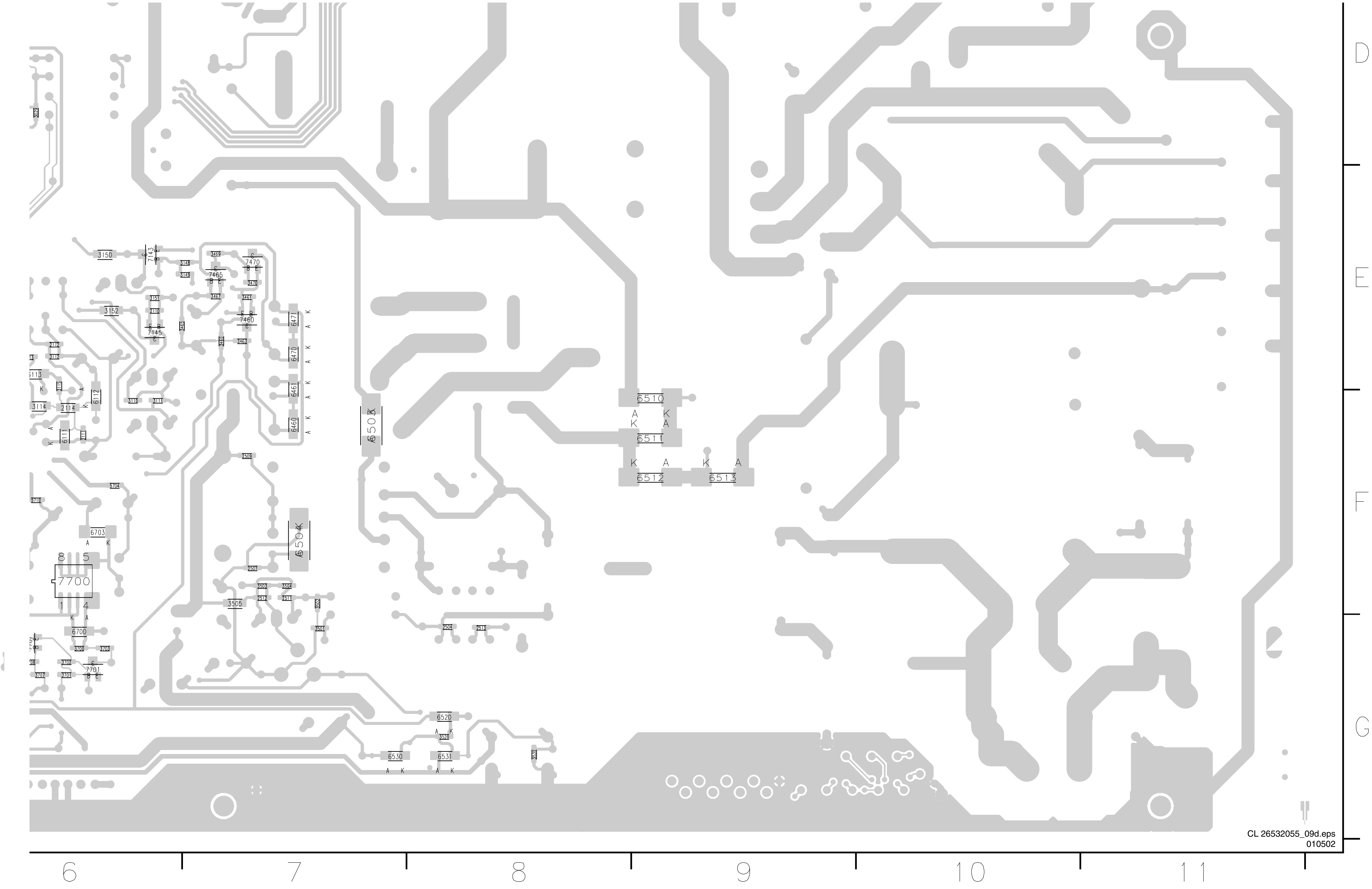

6
7
8
9
10
11
A
B
C
D
6033
6032
6031
6009
6010
6011
6034
6035
7017
7018
7091
7090
6660
6661
6663
6665
7009
6095
6019
7022
6022
6005
6004
6018
6641
6642
6608
6643
6640
6652
6653
6651
3664
3671
7654
6654

CI 26532055_09b.eps
010502

## Layout Power Supply Panel (FM24 AB) (Part 3 Bottom Side)

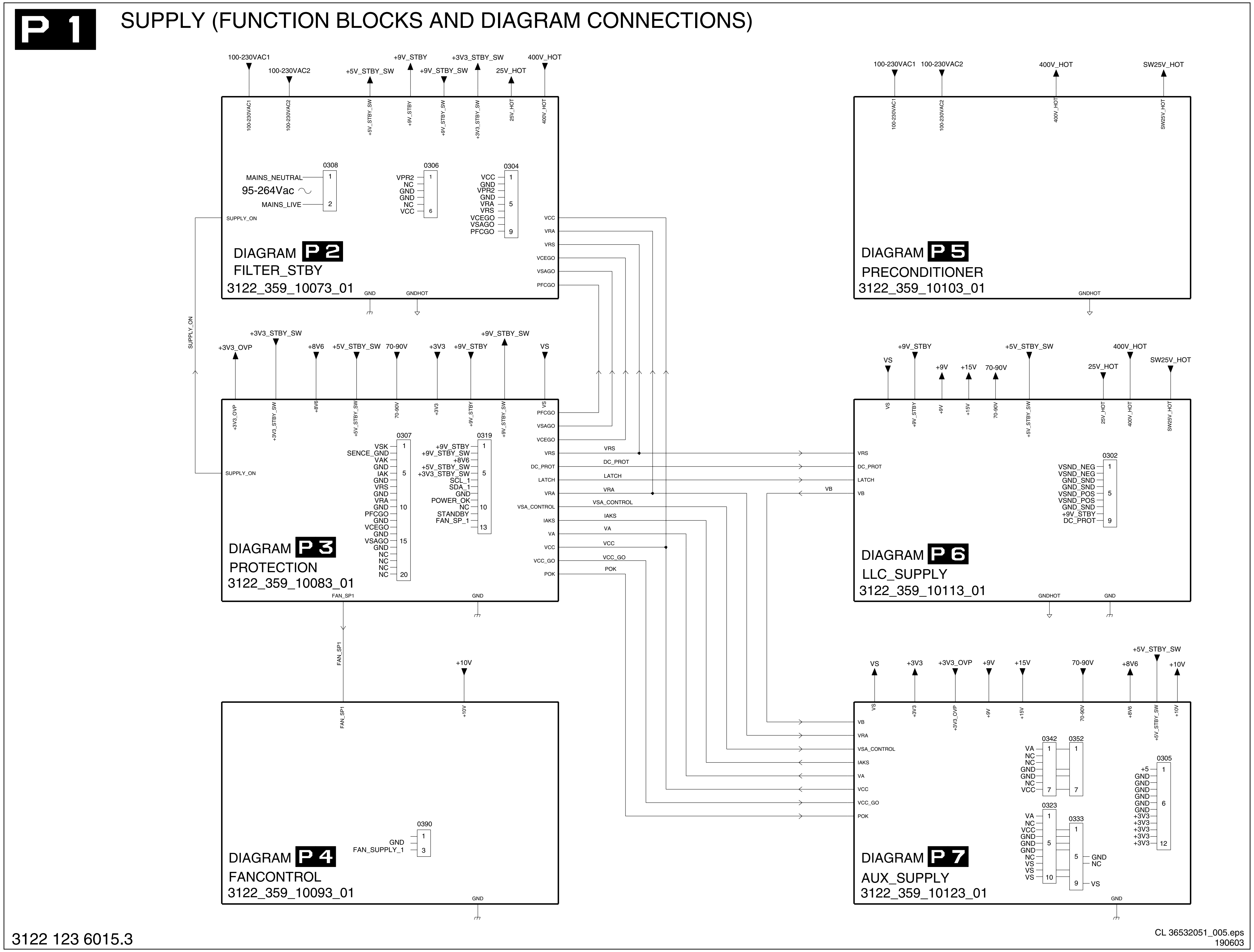

D
E
F
G
1
2
3
4
5
6
8222 674 33463
3311
3262
2267
2262
2268
2263
2264
2260
6232
3300
3301
3123
3200
2205
3028
3040
6023
2117
3122
6133
6113
6123
3114
2114
6112
6111
7134
6709
6703
7706
7700
6706
6700
7701
7702
6216
2217
6205
7202
6213
6202
6214
3141
3142
3140
CI 26532055_09c.eps
010502

## Layout Power Supply Panel (FM24 AB) (Part 4 Bottom Side)

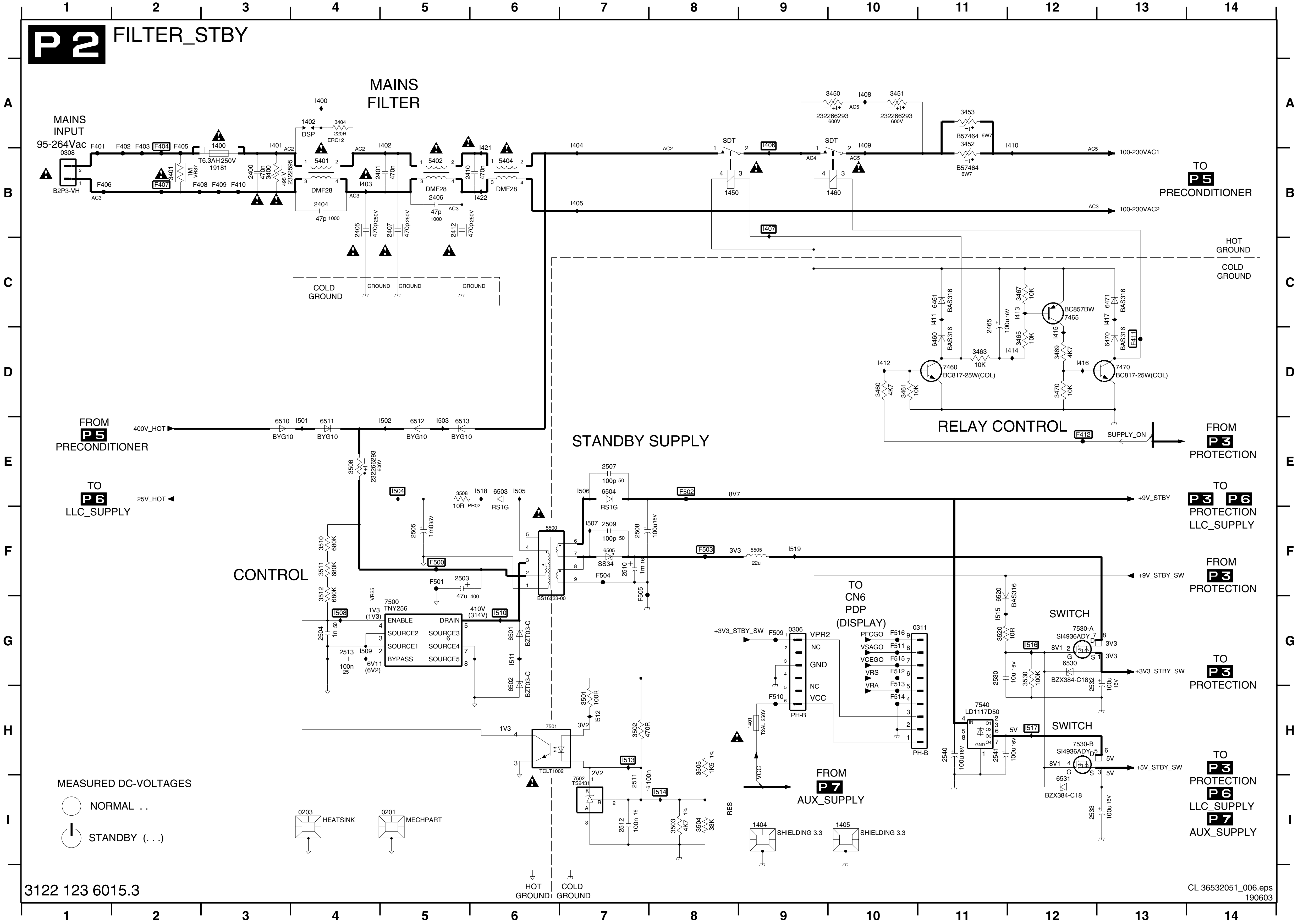

3150
7143
3152
7465
7470
7460
7145
6471
6470
6461
6460
6500
6510
6511
6512
6513
6504
3113
3114
2114
6112
6111
6703
7700
8
5
1
4
6700
7701
3505
6520
6530
6531
D
E
F
G
6
7
8
9
10
11

CL 26532055_09d.eps
010502

## Power Supply Panel (FM33 AA): Function Blocks and Diagram Connections


P 1
SUPPLY (FUNCTION BLOCKS AND DIAGRAM CONNECTIONS)
100-230VAC1
100-230VAC2
+5V_STBY_SW
+9V_STBY
+9V_STBY_SW
+3V3_STBY_SW
25V_HOT
400V_HOT
0308
MAINS_NEUTRAL
95-264Vac
MAINS_LIVE
SUPPLY_ON
0306
VPR2
NC
GND
GND
NC
VCC
0304
VCC
GND
VPR2
GND
VRA
VRS
VCEGO
VSAGO
PFCGO
VCC
VRA
VRS
VCEGO
VSAGO
PFCGO
GND
GNDHOT
DIAGRAM P 2
FILTER_STBY
3122_359_10073_01
SW25V_HOT
DIAGRAM P 5
PRECONDITIONER
3122_359_10103_01
GNDHOT
SUPPLY_ON
+3V3_OVP
+3V3_STBY_SW
+8V6
+5V_STBY_SW
70-90V
+3V3
+9V_STBY
+9V_STBY_SW
VS
0307
VSK
SENCE_GND
VAK
GND
IAK
GND
VRS
GND
VRA
GND
PFCGO
GND
VCEGO
GND
VSAGO
GND
NC
NC
NC
NC
0319
+9V_STBY
+9V_STBY_SW
+8V6
+5V_STBY_SW
+3V3_STBY_SW
SCL_1
SDA_1
GND
POWER_OK
NC
STANDBY
FAN_SP_1
PFCGO
VSAGO
VCEGO
VRS
DC_PROT
LATCH
VRA
VSA_CONTROL
IAKS
VA
VCC
VCC_GO
POK
DIAGRAM P 3
PROTECTION
3122_359_10083_01
FAN_SP1
GND
VS
+9V_STBY
+9V
+15V
70-90V
+5V_STBY_SW
25V_HOT
400V_HOT
SW25V_HOT
VRS
DC_PROT
LATCH
VB
0302
VSND_NEG
VSND_NEG
GND_SND
GND_SND
VSND_POS
VSND_POS
GND_SND
+9V_STBY
DC_PROT
DIAGRAM P 6
LLC_SUPPLY
3122_359_10113_01
GNDHOT
GND
FAN_SP1
+10V
0390
GND
FAN_SUPPLY_1
DIAGRAM P 4
FANCONTROL
3122_359_10093_01
GND
VS
+3V3
+3V3_OVP
+9V
+15V
70-90V
+8V6
+5V_STBY_SW
+10V
VB
VRA
VSA_CONTROL
IAKS
VA
VCC
VCC_GO
POK
0342
0352
VA
NC
NC
GND
GND
NC
VCC
0323
VA
NC
VCC
GND
GND
GND
NC
VS
VS
VS
0333
GND
NC
VS
0305
+5
GND
GND
GND
GND
GND
GND
+3V3
+3V3
+3V3
+3V3
+3V3
DIAGRAM P 7
AUX_SUPPLY
3122_359_10123_01
GND
3122 123 6015.3
CL 36532051_005.eps
190603

# Power Supply Panel (FM33 AA): Filter Standby


P2 FILTER_STBY
MAINS FILTER
MAINS INPUT 95-264Vac
0308
B2P3-VH
F401 F402 F403 F404 F405 F406 F407 F408 F409 F410
1400 T6.3AH 250V 19181
3401 1M VR37
2400 470n
3400 495 V 2322595
1402 DSP
3404 220R ERC12
5401 DMF28
5402 DMF28
5404 DMF28
2404 47p 1000
2406 47p 1000
2405 470p 250V
2407 470p 250V
2412 470p 250V
2401 470n
2410 470n
COLD GROUND
GROUND
SDT
1450
1460
3450 232266293 600V
3451 232266293 600V
3453 B57464 6W7
3452 B57464 6W7
100-230VAC1
100-230VAC2
TO P5 PRECONDITIONER
HOT GROUND
COLD GROUND
6461 BAS316
6460 BAS316
6471 BAS316
6470 BAS316
2465 100u 16V
3467 10K
3465 10K
3463 10K
3469 4K7
3470 10K
3460 4K7
3461 10K
7465 BC857BW
7460 BC817-25W(COL)
7470 BC817-25W(COL)
RELAY CONTROL
SUPPLY_ON
FROM P3 PROTECTION
FROM P5 PRECONDITIONER
400V_HOT
6510 6511 6512 6513 BYG10
3506 232266293 600V
STANDBY SUPPLY
TO P6 LLC_SUPPLY
25V_HOT
3508 10R PR02
6503 RS1G
2507 100p 50
6504 RS1G
2509 100p 50
6505 SS34
2508 1000u 16V
2510 1m 16
5500 BS16233-00
5505 22u
8V7
3V3
+9V_STBY
TO P3 P6 PROTECTION LLC_SUPPLY
+9V_STBY_SW
FROM P3 PROTECTION
CONTROL
3510 680K
3511 680K
3512 680K
2505 1m 035V
2503 47u 400
2504 1n 50
2513 100n 25
7500 TNY256
ENABLE DRAIN SOURCE2 SOURCE3 SOURCE1 SOURCE4 BYPASS SOURCE5
1V3 (1V3)
6V11 (6V2)
410V (314V)
6501 BZT03-C
6502 BZT03-C
7501 TCLT1002
7502 TS2431
3501 100R
3502 470R
2511 100n 16
2512 100n 16
3503 4K7 1%
3504 33K
3505 1K5 1%
RES
TO CN6 PDP (DISPLAY)
+3V3_STBY_SW
0306 PH-B
0311 PH-B
VPR2 NC GND NC VCC
PFCGO VSAGO VCEGO VRS VRA
1401 T2AL 250V
FROM P7 AUX_SUPPLY
SWITCH
7530-A SI4936ADY
7530-B SI4936ADY
6520 BAS316
3520 10R
2530 10u 16V
3530 100K
6530 BZX384-C18
6531 BZX384-C18
2532 100u 16V
2533 100u 16V
7540 LD1117D50
2540 100u 16V
2541 100u 16V
+3V3_STBY_SW
+5V_STBY_SW
TO P3 PROTECTION
TO P3 PROTECTION P6 LLC_SUPPLY P7 AUX_SUPPLY
MEASURED DC-VOLTAGES
NORMAL . .
STANDBY ( . . )
0203 HEATSINK
0201 MECHPART
1404 SHIELDING 3.3
1405 SHIELDING 3.3
HOT GROUND
COLD GROUND
3122 123 6015.3
CL 36532051_006.eps 190603

| | |
|---|---|
| 0201 | I5 |
| 0203 | I4 |
| 0306 | G9 |
| 0308 | B1 |
| 0311 | G10 |
| 1400 | B3 |
| 1401 | H9 |
| 1402 | A4 |
| 1404 | I9 |
| 1405 | I10 |
| 1450 | B8 |
| 1460 | B10 |
| 2400 | B3 |
| 2401 | B4 |
| 2404 | B4 |
| 2405 | B4 |
| 2406 | B5 |
| 2407 | B5 |
| 2410 | B5 |
| 2412 | B5 |
| 2465 | C11 |
| 2503 | F5 |
| 2504 | G4 |
| 2505 | F5 |
| 2507 | E7 |
| 2508 | F7 |
| 2509 | F7 |
| 2510 | F7 |
| 2511 | I7 |
| 2512 | I7 |
| 2513 | G4 |
| 2530 | G11 |
| 2532 | G12 |
| 2533 | I12 |
| 2540 | H11 |
| 2541 | H11 |
| 3400 | B3 |
| 3401 | B2 |
| 3404 | A4 |
| 3450 | A10 |
| 3451 | A10 |
| 3452 | A11 |
| 3453 | A11 |
| 3460 | D10 |
| 3461 | D10 |
| 3463 | D11 |
| 3465 | D12 |
| 3467 | C12 |
| 3469 | D12 |
| 3470 | D12 |
| 3501 | H7 |
| 3502 | H7 |
| 3503 | I8 |
| 3504 | I8 |
| 3505 | H8 |
| 3506 | E4 |
| 3508 | E5 |
| 3510 | F4 |
| 3511 | F4 |
| 3512 | F4 |
| 3520 | G11 |
| 3530 | G12 |
| 5401 | B4 |
| 5402 | B5 |
| 5404 | B6 |
| 5500 | F6 |
| 5505 | F9 |
| 6460 | D11 |
| 6461 | C11 |
| 6470 | D13 |
| 6471 | C13 |
| 6501 | G6 |
| 6502 | G6 |
| 6503 | E6 |
| 6504 | E7 |
| 6505 | F7 |
| 6510 | E3 |
| 6511 | E4 |
| 6512 | E5 |
| 6513 | E5 |
| 6520 | F11 |
| 6530 | G12 |
| 6531 | I12 |
| 7460 | D11 |
| 7465 | C12 |
| 7470 | D13 |
| 7500 | G5 |
| 7501 | H6 |
| 7502 | I7 |
| 7530-A | G12 |
| 7530-B | H12 |
| 7540 | H11 |
| F401 | B1 |
| F402 | B2 |
| F403 | B2 |
| F404 | B2 |
| F405 | B2 |
| F406 | B1 |
| F407 | B2 |
| F408 | B2 |
| F409 | B3 |
| F410 | B3 |
| F411 | D13 |
| F412 | E12 |
| F500 | F5 |
| F501 | F5 |
| F502 | E8 |
| F503 | F8 |
| F504 | F7 |
| F505 | F7 |
| F509 | G9 |
| F510 | H9 |
| F511 | G10 |
| F512 | G10 |
| F513 | H10 |
| F514 | H10 |
| F515 | G10 |
| F516 | G10 |
| I400 | A4 |
| I401 | A3 |
| I402 | A5 |
| I403 | B4 |
| I404 | A7 |
| I405 | B7 |
| I406 | A9 |
| I407 | B9 |
| I408 | A10 |
| I409 | A10 |
| I410 | A12 |
| I411 | C11 |
| I412 | D10 |
| I413 | C12 |
| I414 | D12 |
| I415 | D12 |
| I416 | D12 |
| I417 | C13 |
| I421 | A6 |
| I422 | B6 |
| I501 | E4 |
| I502 | E5 |
| I503 | E5 |
| I504 | E5 |
| I505 | E6 |
| I506 | E7 |
| I507 | F7 |
| I508 | G4 |
| I509 | G4 |
| I510 | G6 |
| I511 | G6 |
| I512 | H7 |
| I513 | H7 |
| I514 | I8 |
| I515 | G11 |
| I516 | G12 |
| I517 | H12 |
| I518 | E6 |
| I519 | F9 |

## Power Supply Panel (FM33 AA): Protection

0307 F8
0319 A15
2303 F4
2304 D1
2305 D1
2306 D3
2316 F3
2322 D4
2324 E6
2343 E8
2350 D9
2352 E9
2364 E11
2366 E15
2369 C12
2370 C13
2371 A15
2372 A15
2373 A15
2374 B15
2375 B15
2376 G2
2380 F4
2381 H1
2385 H4
2393 H11
2396 F3
3300 B1
3301 C1
3302 F3
3303 F3
3304 D1
3305 F3
3306 D1
3307 E1
3308 C2
3310 B3
3311 B3
3312 C3
3313 D3
3316 F2
3317 E3
3319 B4
3320 B4
3321 C4
3322 D4
3323 E4
3324 D1
3325 G12
3326 G12
3327 G13
3328 G13
3331 B5
3332 C6
3333 C6
3334 D6
3335 E6
3339 C7
3340 C7
3341 C7
3342 D7
3343 E7
3344 D8
3345 C8
3347 D8
3348 D8
3349 C9
3350 D9
3351 D9
3352 E9
3353 E10
3354 E9
3358 C11
3359 C11
3360 D10
3361 C10
3363 E10
3364 E11
3368 D13
3369 D13
3370 B13
3371 B13
3372 B13
3373 F1
3374 F2
3376 G2
3377 G1
3378 E13
3380 H2
3381 H2
3382 F4
3385 H4
3386 G6
3387 G6
3388 F8
3389 F9
3390 G10
3391 G10
3392 F11
3393 H10
3394 F11
3395 F10
3396 F2
3397 F2
3800 F3
3801 F3
3802 F3
3803 F4
3804 F4
3805 F4
4300 F7
6312 C2
6313 D2
6321 C4
6322 D4
6325 G12
6333 C5
6334 D5
6340 C7
6341 D7
6344 D8
6347 C8
6348 D8
6362 D10
6364 D11
6365 E12
6375 F1
6376 G1
6378 F14
6390 G10
7304 E1
7308-A D2
7308-B C2
7308-C D4
7308-D C4
7326 G13
7327 G14
7330-A D5
7330-B C5
7330-C D6
7330-D C6
7341 D8
7348 D8
7351 D10
7352 D9
7362 D11
7366-1 G5
7366-2 E14
7370 A13
7372 D12
7375 F1
7376 H1
7389 F9
7391 G11
7393 G11
F300 A14
F301 A14
F302 A14
F303 B14
F304 B14
F305 B14
F306 B14
F307 B14
F308 B14
F309 B14
F310 C14
F311 C14
F312 B9
F313 F7
F314 F7
F315 F7
F316 F7
F317 G7
F318 G7
F319 H7
F320 H7
F321 G7
F322 H7
F323 H7
F324 F7
F343 D7
F368 C3
F384 F9
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I302 C1
I303 F1
I304 D1
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I306 E1
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I327 G13
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I349 D9
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I351 D9
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I365 D13
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I386 G5
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I388 F3
I389 F9
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I391 G10
I392 F10
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I901 F6
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I903 F6
I904 G6
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I911 B10
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I913 C11
I921 A15
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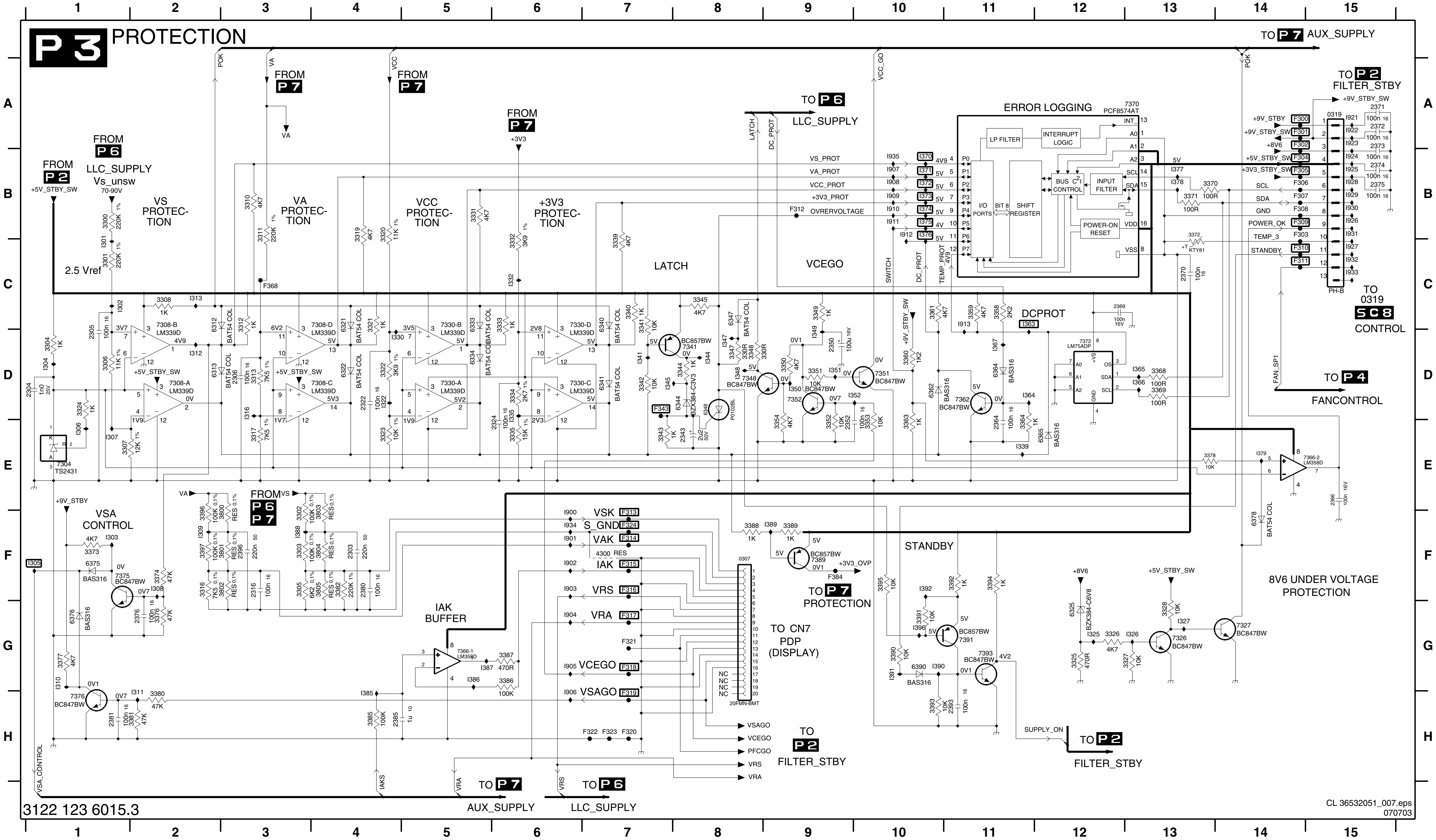
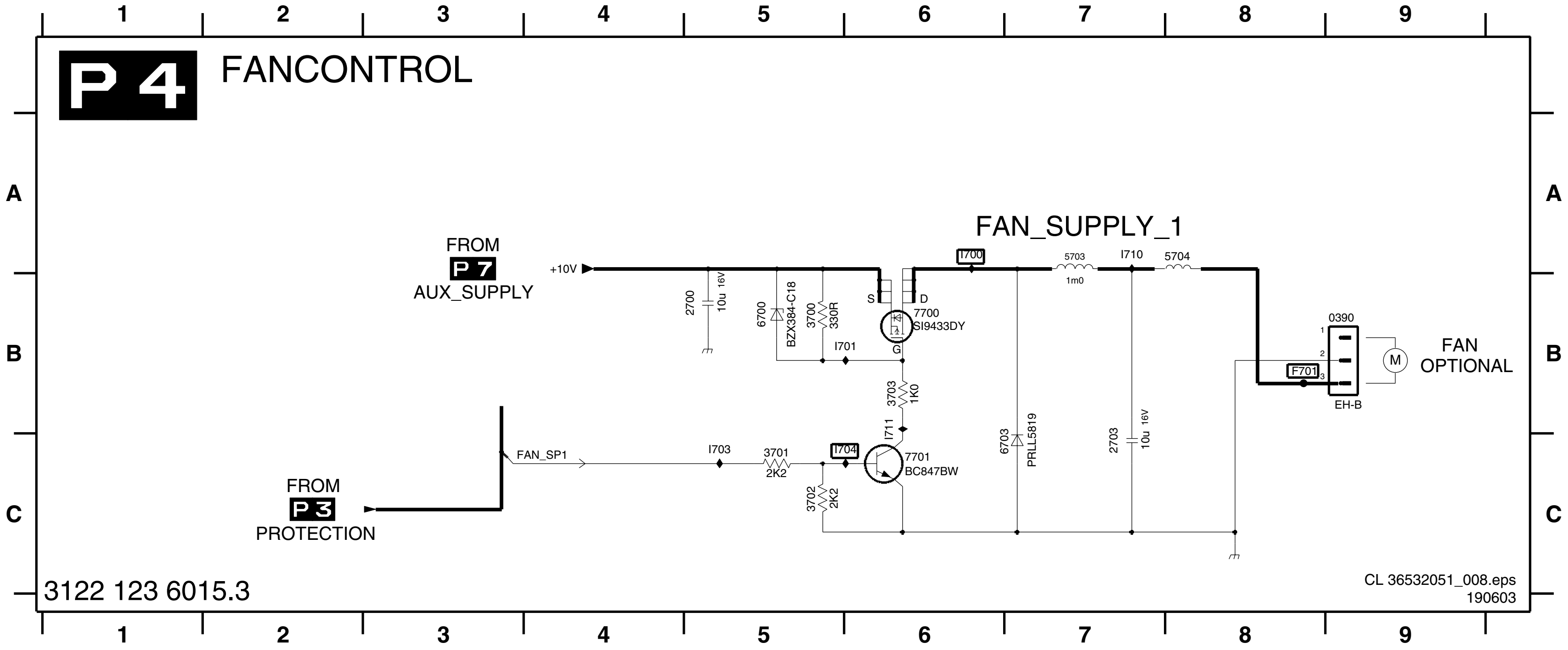
I925 B15
I926 B15
I927 C15
I928 B15
I929 B15
I930 B15
I931 B15
I932 C15
I933 C15
I934 F6
I935 B10

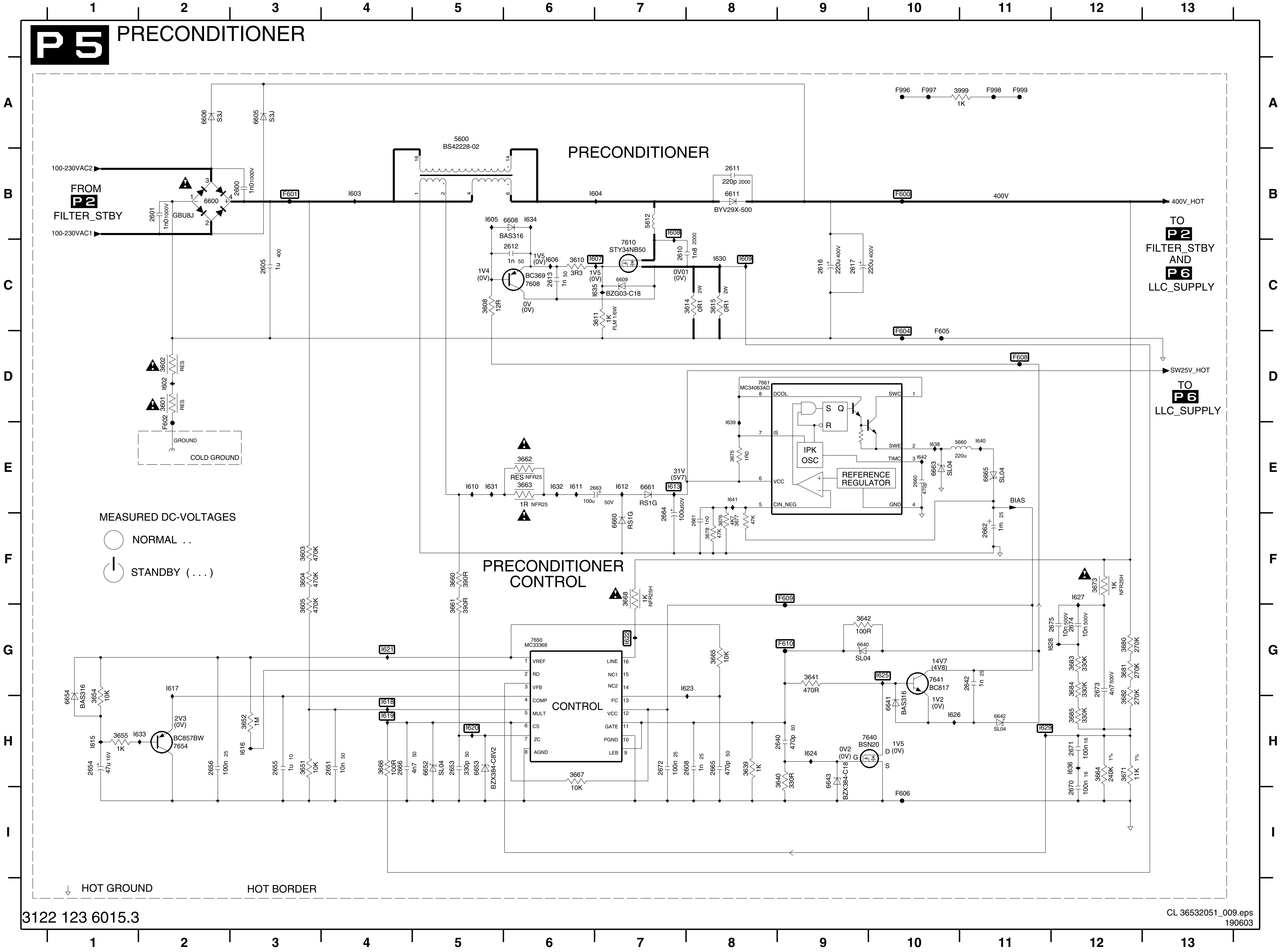

P3 PROTECTION
TO P7 AUX_SUPPLY
TO P2 FILTER_STBY
FROM P2 +5V_STBY_SW
FROM P6 LLC_SUPPLY Vs_unsw 70-90V
VS PROTEC-TION
FROM P7 VA
VA PROTEC-TION
FROM P7 VCC
VCC PROTEC-TION
FROM P7 +3V3
+3V3 PROTEC-TION
2.5 Vref
TO P6 LLC_SUPPLY
LATCH
VCEGO
ERROR LOGGING
7370 PCF8574AT
LP FILTER
INTERRUPT LOGIC
I/O PORTS
BIT 8
SHIFT REGISTER
BUS CONTROL
INPUT FILTER
POWER-ON RESET
VS_PROT
VA_PROT
VCC_PROT
+3V3_PROT
OVERVOLTAGE
SWITCH
DC_PROT
TEMP_PROT
DCPROT
7372 LM75ADP
TO 0319 SC8 CONTROL
TO P4 FANCONTROL
8V6 UNDER VOLTAGE PROTECTION
VSA CONTROL
FROM P6 P7
IAK BUFFER
VSK
S_GND
VAK
IAK
VRS
VRA
VCEGO
VSAGO
TO CN7 PDP (DISPLAY)
20FMN-BMT
TO P7 PROTECTION
+3V3_OVP
STANDBY
SUPPLY_ON
TO P2 FILTER_STBY
TO P7 AUX_SUPPLY
TO P6 LLC_SUPPLY
VSA_CONTROL
IAKS
VRA
VRS
PFCGO
LM339D
LM358D
BC847BW
BC857BW
BAT54 COL
BAS316
TS2431
KTY81
BZX384-C6V8
+9V_STBY
+9V_STBY_SW
+8V6
+5V_STBY_SW
+3V3_STBY_SW
SCL
SDA
GND
POWER_OK
TEMP_3
STANDBY
FAN_SP1
PH-B
3122 123 6015.3
CL 36532051_007.eps
070703

## Power Supply Panel (FM33 AA): Fan Control


P 4
FANCONTROL
FROM
P 7
AUX_SUPPLY
+10V
2700
10u 16V
6700
BZX384-C18
3700
330R
I701
S
D
7700
SI9433DY
G
FAN_SUPPLY_1
I700
5703
1m0
I710
5704
0390
1
2
3
F701
EH-B
M
FAN
OPTIONAL
3703
1K0
I711
FAN_SP1
I703
3701
2K2
I704
7701
BC847BW
3702
2K2
6703
PRLL5819
2703
10u 16V
FROM
P 3
PROTECTION
3122 123 6015.3
CL 36532051_008.eps
190603
1
2
3
4
5
6
7
8
9
A
B
C

| | |
|---|---|
| 0390 | B9 |
| 2700 | B5 |
| 2703 | C7 |
| 3700 | B5 |
| 3701 | C5 |
| 3702 | C5 |
| 3703 | B6 |
| 5703 | A7 |
| 5704 | A8 |
| 6700 | B5 |
| 6703 | C7 |
| 7700 | B6 |
| 7701 | C6 |
| F701 | B8 |
| I700 | A6 |
| I701 | B6 |
| I703 | C5 |
| I704 | C6 |
| I710 | A7 |
| I711 | B6 |

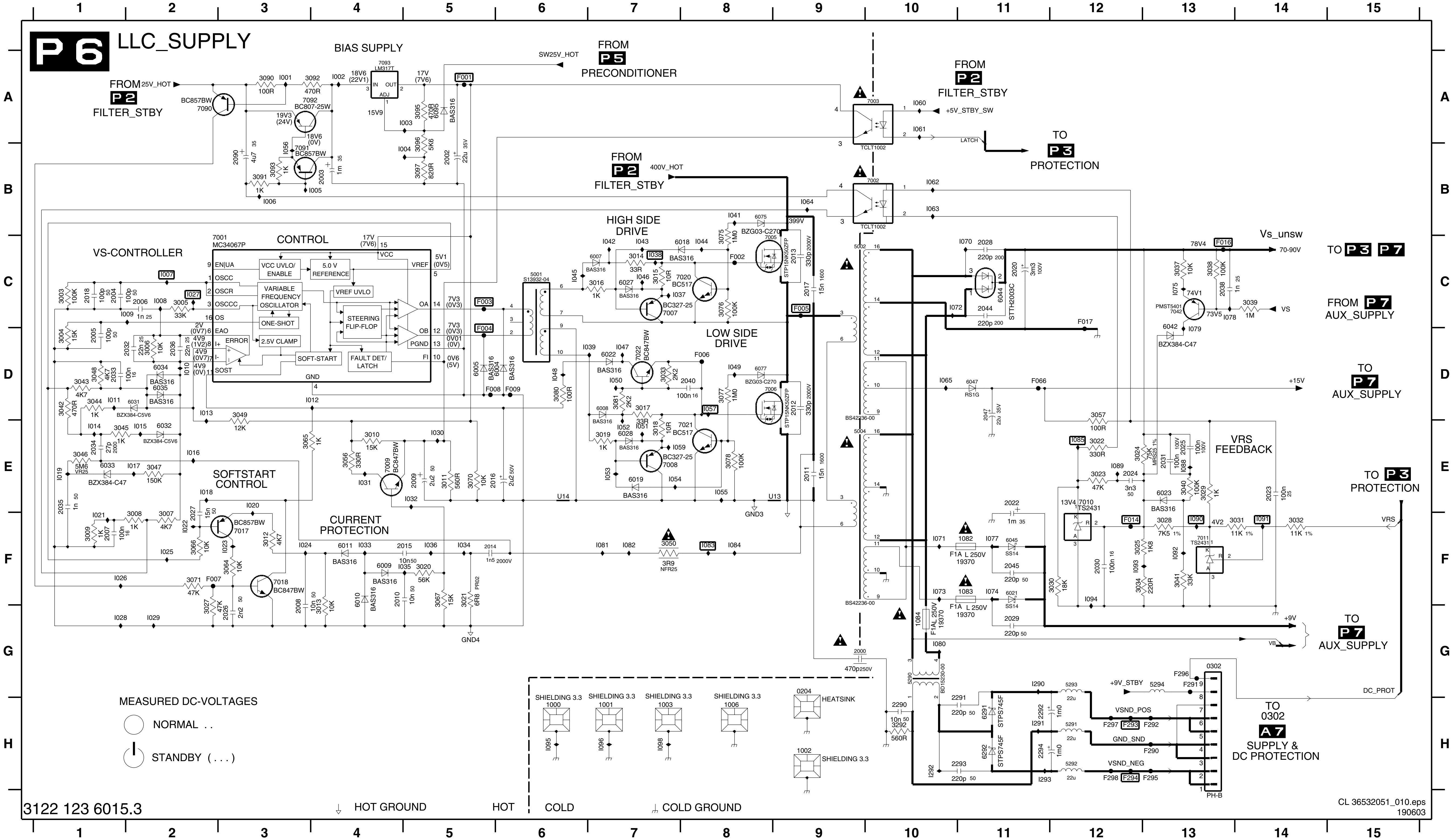
## Power Supply Panel (FM33 AA): Pre-Conditioner


P 5
PRECONDITIONER
100-230VAC2
100-230VAC1
FROM
P 2
FILTER_STBY
GBU8J
6600
6606 S3J
6605 S3J
2600 1n0 1000V
2601 1n0 1000V
F601
I603
5600
BS42228-02
PRECONDITIONER
I604
2611
220p 2000
6611
BYV29X-500
F600
400V
400V_HOT
TO
P 2
FILTER_STBY
AND
P 6
LLC_SUPPLY
2605 1u 400
I605
6608
BAS316
I634
2612
1n 50
1V5 (0V)
I606
3610 3R3
I607
1V5 (0V)
1V4 (0V)
BC369
7608
2613 1n 50
I635
6609
BZG03-C18
7610
STY34NB50
5612
I608
2610 1n8 2000
I630
I609
0V01 (0V)
3614 0R1 2W
3615 0R1 2W
3608 12R
0V (0V)
3611 1K FLM 1/6W
2616 220u 400V
2617 220u 400V
F604
F605
F608
SW25V_HOT
TO
P 6
LLC_SUPPLY
F996
F997
3999 1K
F998
F999
3602 RES
I602
3601 RES
F602
GROUND
COLD GROUND
7661
MC34063AD
DCOL
SWC
IS
SWE
TIMC
VCC
CIN_NEG
GND
IPK OSC
REFERENCE REGULATOR
I639
3675 1R0
I638
5660 220u
I640
I642
6663 SL04
2660 470p
6665 SL04
BIAS
2662 1m 25
3662
RES NFR25
3663
1R NFR25
I610
I631
I632
I611
2663 100u 50V
I612
6661 RS1G
I613
31V (5V7)
I641
2664 100u 50V
6660 RS1G
2661 1n0
3678 47K
3676 47K
3677 47K
MEASURED DC-VOLTAGES
NORMAL . .
STANDBY ( . . . )
3603 470K
3604 470K
3605 470K
3660 390R
3661 390R
PRECONDITIONER
CONTROL
3668 1K NFR25H
F609
3673 1K NFR25H
I627
2675 10n 500V
2674 10n 500V
I628
3680 270K
3681 270K
3682 270K
3683 330K
3684 330K
3685 330K
2673 4n7 500V
7650
MC33368
VREF
RD
VFB
COMP
MULT
CS
ZC
AGND
LINE
NC1
NC2
FC
VCC
GATE
PGND
LEB
CONTROL
I622
I621
I618
I619
I620
3665 10K
I623
F610
3642 100R
6640 SL04
14V7 (4V8)
7641 BC817
1V2 (0V)
I625
3641 470R
6641 BAS316
2642 1n 25
I626
6642 SL04
I629
6654 BAS316
3654 10K
I617
2V3 (0V)
BC857BW
7654
3655 1K
I633
I615
2654 47u 16V
2656 100n 25
3652 1M
I616
2655 1u 10
3651 10K
2651 10n 50
3666 100R
2666 4n7 50
6652 SL04
2653 330p 50
6653 BZX384-C8V2
3667 10K
2672 100n 25
2608 1n 25
2665 470p 50
3639 1K
2640 470p 50
3640 330R
I624
0V2 (0V)
6643 BZX384-C18
7640 BSN20
1V5 (0V)
F606
I636
2671 100n 16
2670 100n 16
3664 240K 1%
3671 11K 1%
HOT GROUND
HOT BORDER
3122 123 6015.3
CL 36532051_009.eps
190603
1 2 3 4 5 6 7 8 9 10 11 12 13
A B C D E F G H I

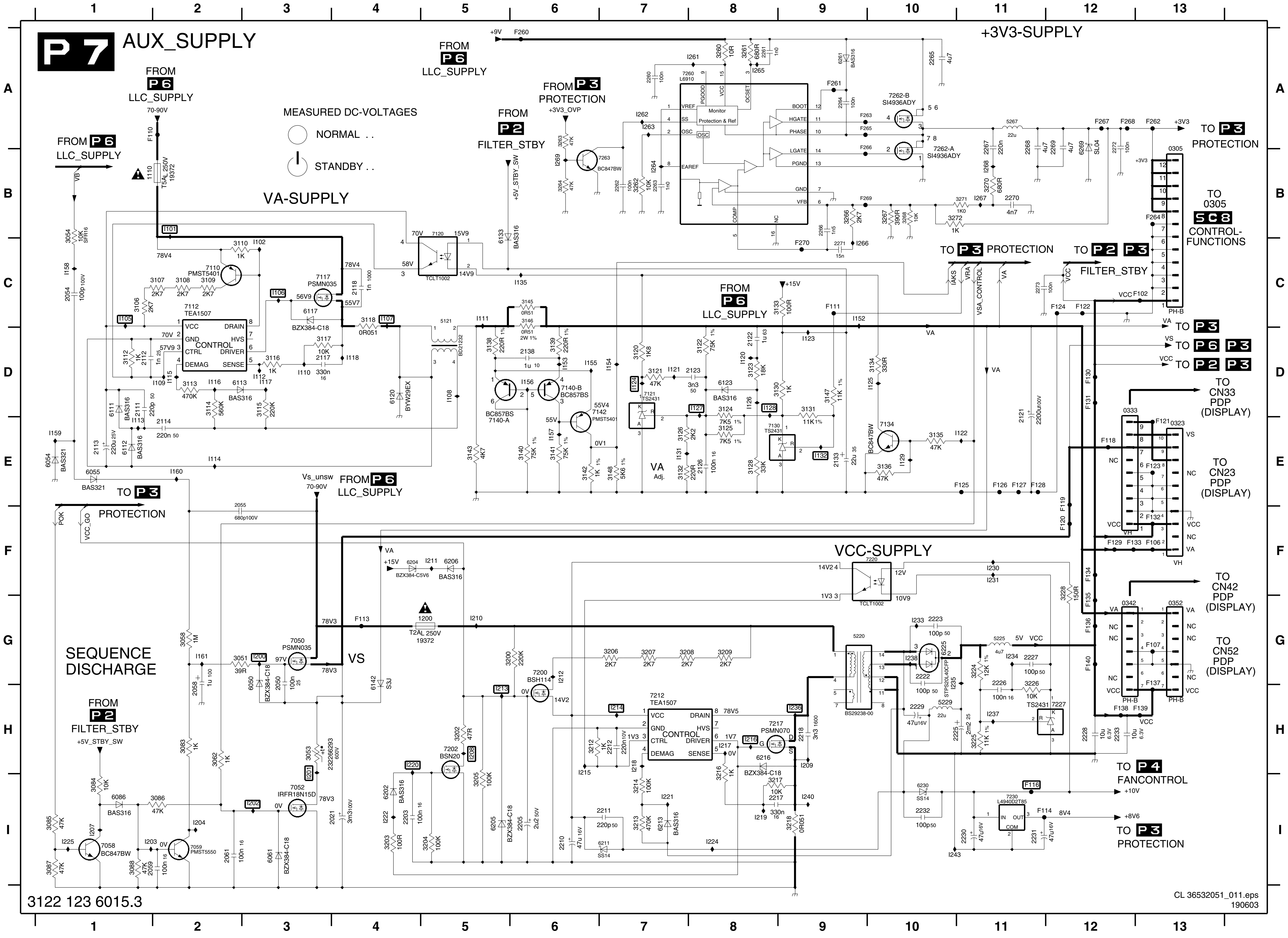
| | |
|---|---|
| 2600 | B3 |
| 2601 | B2 |
| 2605 | C3 |
| 2608 | H8 |
| 2610 | C7 |
| 2611 | B8 |
| 2612 | C6 |
| 2613 | C6 |
| 2616 | C9 |
| 2617 | C9 |
| 2640 | H9 |
| 2642 | G11 |
| 2651 | H4 |
| 2653 | H5 |
| 2654 | H1 |
| 2655 | H3 |
| 2656 | H2 |
| 2660 | E10 |
| 2661 | F8 |
| 2662 | F11 |
| 2663 | E7 |
| 2664 | F7 |
| 2665 | H8 |
| 2666 | H4 |
| 2670 | I12 |
| 2671 | H12 |
| 2672 | H7 |
| 2673 | G12 |
| 2674 | G12 |
| 2675 | G12 |
| 3601 | D2 |
| 3602 | D2 |
| 3603 | F3 |
| 3604 | F3 |
| 3605 | G3 |
| 3608 | C5 |
| 3610 | C6 |
| 3611 | C7 |
| 3614 | C8 |
| 3615 | C8 |
| 3639 | H8 |
| 3640 | H9 |
| 3641 | G9 |
| 3642 | G9 |
| 3651 | H3 |
| 3652 | H3 |
| 3654 | H1 |
| 3655 | H1 |
| 3660 | F5 |
| 3661 | G5 |
| 3662 | E6 |
| 3663 | E6 |
| 3664 | H12 |
| 3665 | G8 |
| 3666 | H4 |
| 3667 | H6 |
| 3668 | F7 |
| 3671 | H12 |
| 3673 | F12 |
| 3675 | E8 |
| 3676 | F8 |
| 3677 | F8 |
| 3678 | F8 |
| 3680 | G12 |
| 3681 | G12 |
| 3682 | H12 |
| 3683 | G12 |
| 3684 | G12 |
| 3685 | H12 |
| 3999 | A11 |
| 5600 | A5 |
| 5612 | B7 |
| 5660 | E11 |
| 6600 | B2 |
| 6605 | A3 |
| 6606 | A2 |
| 6608 | B6 |
| 6609 | C7 |
| 6611 | B8 |
| 6640 | G9 |
| 6641 | H10 |
| 6642 | H11 |
| 6643 | H9 |
| 6652 | H5 |
| 6653 | H5 |
| 6654 | H1 |
| 6660 | F7 |
| 6661 | E7 |
| 6663 | E10 |
| 6665 | E11 |
| 7608 | C6 |
| 7610 | C7 |
| 7640 | H10 |
| 7641 | G10 |
| 7650 | G6 |
| 7654 | H2 |
| 7661 | D8 |
| F600 | B10 |
| F601 | B3 |
| F602 | E2 |
| F604 | D10 |
| F605 | D10 |
| F606 | I10 |
| F608 | D11 |
| F609 | F9 |
| F610 | G9 |
| F996 | A10 |
| F997 | A10 |
| F998 | A11 |
| F999 | A11 |
| I602 | D2 |
| I603 | B4 |
| I604 | B7 |
| I605 | B5 |
| I606 | C6 |
| I607 | C7 |
| I608 | B7 |
| I609 | C8 |
| I610 | E5 |
| I611 | E6 |
| I612 | E7 |
| I613 | E7 |
| I615 | H1 |
| I616 | H3 |
| I617 | G2 |
| I618 | H4 |
| I619 | H4 |
| I620 | H5 |
| I621 | G4 |
| I622 | G7 |
| I623 | G8 |
| I624 | H9 |
| I625 | G10 |
| I626 | H10 |
| I627 | F12 |
| I628 | G11 |
| I629 | H11 |
| I630 | C8 |
| I631 | E5 |
| I632 | E6 |
| I633 | H2 |
| I634 | B6 |
| I635 | C6 |
| I636 | H12 |
| I638 | E10 |
| I639 | E8 |
| I640 | E11 |
| I641 | E8 |
| I642 | E10 |

# Power Supply Panel (FM33 AA): LLC Supply

U13 E9
U14 E6
0204 G9
0302 G13
1000 H6
1001 H7
1002 H9
1003 H7
1006 H8
1082 F11
1083 F11
1084 G10
2000 G9
2002 B5
2003 B4
2004 C1
2005 D1
2006 C2
2007 F1
2008 G3
2009 E5
2010 F4
2011 E9
2012 D9
2013 C9
2014 F5
2015 F5
2016 E5
2017 C9
2018 C1
2020 C11
2022 E11
2023 E14
2024 E12
2025 E13
2026 G3
2027 F2
2028 C11
2029 G11
2030 F12
2031 E13
2032 D2
2033 D1
2034 E1
2035 E1
2036 D2
2038 C13
2040 D8
2044 C11
2045 F11
2047 D11
2090 B3
2290 H10
2291 H11
2292 H11
2293 H11
2294 H11
3003 C1
3004 D1
3005 C2
3006 D2
3007 F2
3008 F2
3009 F1
3010 E4
3011 E5
3012 F3
3013 G4
3014 C7
3015 C7
3016 C7
3017 D7
3018 E7
3019 E7
3020 F5
3021 F5
3022 E12
3023 E12
3024 E12
3025 F12
3027 G2
3028 F13
3029 E13
3030 F12
3031 F14
3032 F14
3033 D7
3034 F12
3037 C13
3038 C13
3039 C14
3040 E13
3041 F13
3042 D1
3043 D1
3044 D1
3045 E1
3046 E1
3047 E2
3048 D1
3049 D3
3050 F7
3056 E4
3057 D12
3064 F3
3065 E3
3066 F2
3067 F5
3070 E5
3071 F2
3075 C8
3076 C8
3077 D8
3078 E8
3080 D6
3081 D7
3090 A3
3091 B3
3092 A4
3093 B3
3095 A5
3096 B5
3097 B5
3292 H10
5001 C6
5002 C9
5004 E9
5290 G10
5291 H12
5292 H12
5293 G12
5294 G13
6004 D6
6005 D5
6007 C7
6008 D7
6009 F4
6010 F4
6011 F4
6018 C8
6019 E7
6021 F11
6022 D7
6023 E13
6027 C7
6028 E7
6031 D2
6032 E2
6033 E1
6034 D2
6035 D2
6042 D13
6044 C11
6045 F11
6047 D11
6075 B8
6077 D8
6095 A5
6291 H11
6292 H11
7001 C2
7002 B10
7003 A10
7005 C8
7006 D8
7007 C7
7008 E7
7009 E4
7010 E12
7011 F13
7017 F3
7018 F3
7020 C8
7021 E8
7022 D7
7042 C13
7090 A2
7091 B3
7092 A4
7093 A4
F001 A5
F002 C8
F003 C5
F004 D5
F005 C9
F006 D8
F007 F2
F008 D5
F009 D6
F014 F12
F016 C13
F017 C12
F066 D11
F290 H13
F291 G13
F292 H13
F293 H12
F294 H12
F295 H13
F296 G13
F297 H12
F298 H12
I001 A3
I002 A4
I003 A5
I004 B5
I005 B4
I006 B3
I007 C2
I008 C2
I009 C2
I010 D2
I011 D1
I012 D4
I013 D2
I014 E1
I015 E2
I016 E2
I017 E2
I018 E2
I019 E1
I020 E3
I021 F1
I022 F2
I023 F3
I024 F3
I025 F2
I026 F1
I027 C2
I028 G1
I029 G2
I030 E5
I031 E4
I032 E5
I033 F4
I034 F5
I035 F5
I036 F5
I037 C7
I038 C7
I039 D7
I041 B8
I042 C7
I043 C7
I044 C8
I045 C6
I046 C7
I047 D7
I048 D6
I049 D8
I050 D7
I051 E7
I052 E7
I053 E7
I054 E7
I055 E8
I056 B3
I057 D8
I059 E7
I060 A10
I061 A10
I062 B10
I063 B10
I064 B9
I065 D10
I070 C11
I071 F10
I072 C10
I073 F10
I074 F11
I075 C13
I077 F11
I078 C13
I079 D13
I080 G10
I081 F7
I082 F7
I083 F8
I084 F8
I085 E12
I088 E13
I089 E12
I090 F13
I091 F14
I092 F13
I093 F12
I094 F12
I095 H6
I096 H7
I098 H7
I290 G11
I291 H11
I292 H10
I293 H11


P6 LLC_SUPPLY
BIAS SUPPLY
FROM P5 PRECONDITIONER
SW25V_HOT
FROM P2 FILTER_STBY
25V_HOT
FROM P2 FILTER_STBY
TO P3 PROTECTION
FROM P2 FILTER_STBY
400V_HOT
VS-CONTROLLER
CONTROL
7001 MC34067P
VCC UVLO/ENABLE
5.0 V REFERENCE
VARIABLE FREQUENCY OSCILLATOR
VREF UVLO
ONE-SHOT
STEERING FLIP-FLOP
ERROR
2.5V CLAMP
SOFT-START
FAULT DET/LATCH
GND
HIGH SIDE DRIVE
LOW SIDE DRIVE
SOFTSTART CONTROL
CURRENT PROTECTION
Vs_unsw
TO P3 P7
FROM P7 AUX_SUPPLY
TO P7 AUX_SUPPLY
VRS FEEDBACK
TO P3 PROTECTION
TO P7 AUX_SUPPLY
TO 0302 A7 SUPPLY & DC PROTECTION
+5V_STBY_SW
LATCH
70-90V
+15V
+9V
VB
VRS
DC_PROT
+9V_STBY
VSND_POS
GND_SND
VSND_NEG
SHIELDING 3.3
HEATSINK
MEASURED DC-VOLTAGES
NORMAL . .
STANDBY ( . . . )
3122 123 6015.3
HOT GROUND
HOT
COLD
COLD GROUND
CL 36532051_010.eps
190603
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H

## Power Supply Panel (FM33 AA): Aux Supply


P7 AUX_SUPPLY
+3V3-SUPPLY
VA-SUPPLY
VCC-SUPPLY
SEQUENCE DISCHARGE
MEASURED DC-VOLTAGES
NORMAL ..
STANDBY ..
FROM P6 LLC_SUPPLY
FROM P3 PROTECTION
FROM P2 FILTER_STBY
FROM P2 FILTER_STBY
TO P3 PROTECTION
TO 0305 SC8 CONTROL-FUNCTIONS
TO P2 P3 FILTER_STBY
TO P3 PROTECTION
TO P6 P3
TO P2 P3
TO CN33 PDP (DISPLAY)
TO CN23 PDP (DISPLAY)
TO CN42 PDP (DISPLAY)
TO CN52 PDP (DISPLAY)
TO P4 FANCONTROL
TO P3 PROTECTION
7260 L6910
Monitor
Protection & Ref
7262-B SI4936ADY
7262-A SI4936ADY
7112 TEA1507
CONTROL
7110 PMST5401
7117 PSMN035
7120 TCLT1002
5121
7140-A BC857BS
7140-B BC857BS
7142 PMST5401
7121 TS2431
7130 TS2431
7134 BC847BW
7263 BC847BW
7050 PSMN035
7052 IRFR18N15D
7058 BC847BW
7059 PMST5550
7200 BSH114
7202 BSN20
7212 TEA1507
7217 PSMN070
7220 TCLT1002
5220 BS29238-00
7227 TS2431
7230 L4940D2T85
1110 T5A 250V 19372
1200 T2AL 250V 19372
VS
VA
VCC
+3V3
+9V
+15V
+10V
+8V6
78V3
78V4
14V9
15V9
12V
10V9
5V
8V4
0305
0333
0323
0342
0352
PH-B
VH
3122 123 6015.3
CL 36532051_011.eps
190603

|  |  |
|---|---|
| 0305 | A13 |
| 0323 | E13 |
| 0333 | D13 |
| 0342 | G13 |
| 0352 | G13 |
| 1110 | B1 |
| 1200 | G5 |
| 2021 | I4 |
| 2050 | G3 |
| 2054 | C1 |
| 2055 | F2 |
| 2058 | H2 |
| 2059 | I1 |
| 2061 | I2 |
| 2111 | D1 |
| 2112 | D1 |
| 2113 | E1 |
| 2114 | E2 |
| 2117 | D3 |
| 2118 | C4 |
| 2121 | D11 |
| 2122 | D8 |
| 2123 | D8 |
| 2126 | E8 |
| 2133 | E9 |
| 2138 | D6 |
| 2203 | I4 |
| 2205 | I6 |
| 2210 | I6 |
| 2211 | I7 |
| 2212 | H7 |
| 2217 | I8 |
| 2218 | H9 |
| 2222 | G10 |
| 2223 | G10 |
| 2225 | H11 |
| 2226 | H11 |
| 2227 | G11 |
| 2228 | H12 |
| 2229 | H10 |
| 2230 | I11 |
| 2231 | I11 |
| 2232 | I10 |
| 2233 | H12 |
| 2260 | A7 |
| 2261 | A8 |
| 2262 | B7 |
| 2263 | B7 |
| 2264 | A9 |
| 2265 | A10 |
| 2266 | B9 |
| 2267 | A11 |
| 2268 | A11 |
| 2269 | A12 |
| 2270 | B11 |
| 2271 | C9 |
| 2272 | A12 |
| 2273 | C11 |
| 3051 | G2 |
| 3053 | H3 |
| 3054 | B1 |
| 3058 | G2 |
| 3062 | H2 |
| 3083 | H2 |
| 3084 | I1 |
| 3085 | I1 |
| 3086 | I2 |
| 3087 | I1 |
| 3088 | I1 |
| 3106 | C1 |
| 3107 | C2 |
| 3108 | C2 |
| 3109 | C2 |
| 3110 | C2 |
| 3112 | D1 |
| 3113 | D2 |
| 3114 | D2 |
| 3115 | D3 |
| 3116 | D3 |
| 3117 | D3 |
| 3118 | C4 |
| 3120 | D7 |
| 3121 | D7 |
| 3122 | D8 |
| 3123 | D8 |
| 3124 | D8 |
| 3125 | E8 |
| 3126 | E7 |
| 3128 | E8 |
| 3130 | D9 |
| 3131 | D9 |
| 3132 | E7 |
| 3133 | C9 |
| 3134 | D10 |
| 3135 | E10 |
| 3136 | E10 |
| 3138 | D5 |
| 3139 | D6 |
| 3140 | E6 |
| 3141 | E6 |
| 3142 | E6 |
| 3143 | E5 |
| 3145 | C6 |
| 3146 | C6 |
| 3147 | D9 |
| 3148 | E7 |
| 3200 | G6 |
| 3202 | H5 |
| 3203 | I4 |
| 3204 | I5 |
| 3205 | I5 |
| 3206 | G7 |
| 3207 | G7 |
| 3208 | G7 |
| 3209 | G8 |
| 3212 | H6 |
| 3213 | I7 |
| 3214 | I7 |
| 3216 | H8 |
| 3217 | I8 |
| 3218 | I9 |
| 3224 | G11 |
| 3225 | H11 |
| 3226 | H11 |
| 3228 | F12 |
| 3260 | A8 |
| 3261 | A8 |
| 3262 | B7 |
| 3263 | A6 |
| 3264 | B6 |
| 3266 | B9 |
| 3267 | B10 |
| 3268 | B10 |
| 3270 | B11 |
| 3271 | B11 |
| 3272 | B10 |
| 5121 | C5 |
| 5220 | G9 |
| 5225 | G11 |
| 5229 | H10 |
| 5267 | A11 |
| 6050 | G3 |
| 6054 | E1 |
| 6055 | E1 |
| 6061 | I3 |
| 6086 | I1 |
| 6111 | D1 |
| 6112 | E1 |
| 6113 | D2 |
| 6117 | C3 |
| 6120 | D4 |
| 6123 | D8 |
| 6133 | B5 |
| 6142 | G4 |
| 6202 | I4 |
| 6204 | F4 |
| 6205 | I5 |
| 6206 | F5 |
| 6211 | I7 |
| 6213 | I7 |
| 6216 | H8 |
| 6225 | G10 |
| 6230 | I10 |
| 6261 | A9 |
| 6269 | A12 |
| 7050 | G3 |
| 7052 | I3 |
| 7058 | I1 |
| 7059 | I2 |
| 7110 | C2 |
| 7112 | C2 |
| 7117 | C3 |
| 7120 | B5 |
| 7121 | D7 |
| 7130 | E8 |
| 7134 | E10 |
| 7140-A | E5 |
| 7140-B | D6 |
| 7142 | D6 |
| 7200 | G6 |
| 7202 | H5 |
| 7212 | H7 |
| 7217 | H8 |
| 7220 | F10 |
| 7227 | H12 |
| 7230 | I11 |
| 7260 | A8 |
| 7262-A | B10 |
| 7262-B | A10 |
| 7263 | B6 |
| F102 | C13 |
| F106 | F13 |
| F107 | G13 |
| F110 | A1 |
| F111 | C9 |
| F113 | G4 |
| F114 | I11 |
| F116 | I11 |
| F118 | E12 |
| F119 | E12 |
| F120 | F12 |
| F121 | E13 |
| F122 | C12 |
| F123 | E13 |
| F124 | C12 |
| F125 | E11 |
| F126 | E11 |
| F127 | E11 |
| F128 | E11 |
| F129 | F12 |
| F130 | D12 |
| F131 | D12 |
| F132 | F13 |
| F133 | F12 |
| F134 | F12 |
| F135 | G12 |
| F136 | G12 |
| F137 | H13 |
| F138 | H12 |
| F139 | H13 |
| F140 | G12 |
| F260 | A6 |
| F261 | A9 |
| F262 | A13 |
| F263 | A9 |
| F264 | B13 |
| F265 | A9 |
| F266 | B9 |
| F267 | A12 |
| F268 | A12 |
| F269 | B9 |
| F270 | C9 |
| I101 | B2 |
| I102 | C3 |
| I105 | C1 |
| I106 | C3 |
| I107 | C4 |
| I108 | D5 |
| I109 | D2 |
| I110 | D3 |
| I111 | C5 |
| I112 | D3 |
| I113 | E1 |
| I114 | E2 |
| I115 | D2 |
| I116 | D2 |
| I117 | D3 |
| I118 | D4 |
| I120 | D8 |
| I121 | D7 |
| I122 | E11 |
| I123 | D9 |
| I124 | D7 |
| I125 | D10 |
| I126 | D8 |
| I127 | D8 |
| I128 | D8 |
| I129 | E10 |
| I131 | E7 |
| I132 | E9 |
| I135 | C6 |
| I152 | C9 |
| I153 | D6 |
| I154 | D7 |
| I155 | D6 |
| I156 | D6 |
| I157 | E6 |
| I158 | C1 |
| I159 | E1 |
| I160 | E2 |
| I161 | G2 |
| I200 | G3 |
| I201 | H3 |
| I202 | I3 |
| I203 | I1 |
| I204 | I2 |
| I207 | I1 |
| I208 | H5 |
| I209 | H9 |
| I210 | G5 |
| I211 | F5 |
| I212 | G6 |
| I213 | H5 |
| I214 | H7 |
| I215 | H6 |
| I216 | H8 |
| I217 | H8 |
| I218 | H7 |
| I219 | I8 |
| I220 | H4 |
| I221 | I7 |
| I222 | I4 |
| I224 | I8 |
| I225 | I1 |
| I230 | F11 |
| I231 | F11 |
| I233 | G10 |
| I234 | G11 |
| I235 | G10 |
| I236 | H9 |
| I237 | H11 |
| I238 | G10 |
| I240 | I9 |
| I243 | I10 |
| I261 | A8 |
| I262 | A7 |
| I263 | A7 |
| I264 | B7 |
| I265 | A8 |
| I266 | C9 |
| I267 | B11 |
| I268 | B11 |
| I269 | B6 |

# Layout Power Supply Panel (FM33 AA) (Overview Top Side only (no components on bottom side))

| | |
|---|---|
| 0201 | C4 |
| 0203 | D3 |
| 0204 | D7 |
| 0302 | A9 |
| 0305 | G8 |
| 0306 | G3 |
| 0307 | G2 |
| 0308 | G1 |
| 0311 | G3 |
| 0319 | G5 |
| 0323 | F9 |
| 0333 | F9 |
| 0342 | F9 |
| 0352 | F9 |
| 0390 | A9 |
| 1082 | C8 |
| 1083 | C8 |
| 1084 | B8 |
| 1110 | D7 |
| 1200 | E6 |
| 1400 | G1 |
| 1401 | F8 |
| 1402 | F1 |
| 1450 | F4 |
| 1460 | E4 |
| 2000 | A5 |
| 2002 | A4 |
| 2003 | A4 |
| 2004 | A4 |
| 2005 | A4 |
| 2006 | A4 |
| 2007 | A5 |
| 2008 | A4 |
| 2009 | A4 |
| 2010 | A3 |
| 2011 | B5 |
| 2012 | B5 |
| 2013 | C5 |
| 2014 | B5 |
| 2015 | A4 |
| 2016 | A4 |
| 2017 | C5 |
| 2018 | A4 |
| 2020 | B9 |
| 2021 | D9 |
| 2022 | B8 |
| 2023 | E5 |
| 2024 | E5 |
| 2025 | E8 |
| 2026 | A4 |
| 2027 | A4 |
| 2028 | C8 |
| 2029 | C8 |
| 2030 | E5 |
| 2031 | E8 |
| 2032 | A4 |
| 2033 | A4 |
| 2034 | B5 |
| 2035 | A5 |
| 2036 | A4 |
| 2038 | D8 |
| 2040 | B3 |
| 2044 | C8 |
| 2045 | C8 |
| 2047 | B8 |
| 2050 | E8 |
| 2054 | D8 |
| 2055 | D8 |
| 2058 | C8 |
| 2059 | D8 |
| 2061 | D8 |
| 2090 | B3 |
| 2111 | D5 |
| 2112 | D5 |
| 2113 | D5 |
| 2114 | D5 |
| 2117 | D6 |
| 2118 | C6 |
| 2121 | C9 |
| 2122 | E6 |
| 2123 | D5 |
| 2126 | D6 |
| 2133 | E5 |
| 2138 | E7 |
| 2203 | F5 |
| 2205 | F5 |
| 2210 | G6 |
| 2211 | F6 |
| 2212 | F6 |
| 2217 | F6 |
| 2218 | E6 |
| 2222 | F8 |
| 2223 | F8 |
| 2225 | F8 |
| 2226 | E8 |
| 2227 | E8 |
| 2228 | E9 |
| 2229 | E7 |
| 2230 | E6 |
| 2231 | E7 |
| 2232 | E7 |
| 2233 | E9 |
| 2260 | G8 |
| 2261 | G8 |
| 2262 | G8 |
| 2263 | G8 |
| 2264 | G8 |
| 2265 | G9 |
| 2266 | G8 |
| 2267 | G9 |
| 2268 | G8 |
| 2269 | G8 |
| 2270 | G9 |
| 2271 | G8 |
| 2272 | G8 |
| 2273 | G9 |
| 2290 | B8 |
| 2291 | B8 |
| 2292 | A8 |
| 2293 | C8 |
| 2294 | A8 |
| 2303 | G7 |
| 2304 | G8 |
| 2305 | G7 |
| 2306 | G7 |
| 2316 | G7 |
| 2322 | G8 |
| 2324 | G8 |
| 2343 | G6 |
| 2350 | G7 |
| 2352 | G7 |
| 2364 | G6 |
| 2366 | G7 |
| 2369 | G5 |
| 2370 | G5 |
| 2371 | G5 |
| 2372 | G5 |
| 2373 | G5 |
| 2374 | G5 |
| 2375 | G5 |
| 2376 | G6 |
| 2380 | G7 |
| 2381 | G6 |
| 2385 | G7 |
| 2393 | G6 |
| 2396 | G8 |
| 2400 | F1 |
| 2401 | F2 |
| 2404 | F2 |
| 2405 | E1 |
| 2406 | E2 |
| 2407 | E1 |
| 2410 | E2 |
| 2412 | D1 |
| 2465 | E5 |
| 2503 | F4 |
| 2504 | G4 |
| 2505 | C4 |
| 2507 | F5 |
| 2508 | F5 |
| 2509 | F5 |
| 2510 | F5 |
| 2511 | G4 |
| 2512 | G4 |
| 2513 | G3 |
| 2530 | G3 |
| 2532 | G3 |
| 2533 | G4 |
| 2540 | F5 |
| 2541 | F5 |
| 2600 | E2 |
| 2601 | D2 |
| 2605 | C1 |
| 2608 | A2 |
| 2610 | C2 |
| 2611 | C2 |
| 2612 | B2 |
| 2613 | B2 |
| 2616 | D4 |
| 2617 | C4 |
| 2640 | A2 |
| 2642 | A2 |
| 2651 | A2 |
| 2653 | B3 |
| 2654 | B2 |
| 2655 | A2 |
| 2656 | B2 |
| 2660 | A2 |
| 2661 | A1 |
| 2662 | A2 |
| 2663 | A2 |
| 2664 | A2 |
| 2665 | B2 |
| 2666 | A2 |
| 2670 | A2 |
| 2671 | A2 |
| 2672 | A2 |
| 2673 | B2 |
| 2674 | B2 |
| 2675 | B2 |
| 2700 | A8 |
| 2703 | A9 |
| 3003 | A4 |
| 3004 | A4 |
| 3005 | A4 |
| 3006 | A4 |
| 3007 | A4 |
| 3008 | A5 |
| 3009 | A5 |
| 3010 | A3 |
| 3011 | A4 |
| 3012 | A4 |
| 3013 | A4 |
| 3014 | B4 |
| 3015 | C4 |
| 3016 | C4 |
| 3017 | B3 |
| 3018 | B4 |
| 3019 | B4 |
| 3020 | A3 |
| 3021 | B5 |
| 3022 | E5 |
| 3023 | E5 |
| 3024 | E8 |
| 3025 | E5 |
| 3027 | A4 |
| 3028 | E5 |
| 3029 | E5 |
| 3030 | E5 |
| 3031 | E5 |
| 3032 | E5 |
| 3033 | B3 |
| 3034 | E5 |
| 3037 | D8 |
| 3038 | D8 |
| 3039 | D8 |
| 3040 | E5 |
| 3041 | E5 |
| 3042 | A4 |
| 3043 | A4 |
| 3044 | A4 |
| 3045 | A4 |
| 3046 | A5 |
| 3047 | A4 |
| 3048 | A4 |
| 3049 | A3 |
| 3050 | B5 |
| 3051 | D8 |
| 3053 | D8 |
| 3054 | D8 |
| 3056 | A3 |
| 3057 | E5 |
| 3058 | D8 |
| 3062 | D8 |
| 3064 | A4 |
| 3065 | A4 |
| 3066 | A4 |
| 3067 | A4 |
| 3070 | A4 |
| 3071 | A4 |
| 3075 | C4 |
| 3076 | C4 |
| 3077 | A5 |
| 3078 | B4 |
| 3080 | B3 |
| 3081 | B4 |
| 3083 | D8 |
| 3084 | D8 |
| 3085 | D8 |
| 3086 | D8 |
| 3087 | D8 |
| 3088 | D8 |
| 3090 | A3 |
| 3091 | B3 |
| 3092 | A3 |
| 3093 | B3 |
| 3095 | B4 |
| 3096 | B4 |
| 3097 | B4 |
| 3106 | D6 |
| 3107 | D6 |
| 3108 | D6 |
| 3109 | D6 |
| 3110 | D6 |
| 3112 | D5 |
| 3113 | D5 |
| 3114 | D5 |
| 3115 | D5 |
| 3116 | D6 |
| 3117 | D6 |
| 3118 | D7 |
| 3120 | D5 |
| 3121 | D5 |
| 3122 | E6 |
| 3123 | E6 |
| 3124 | D6 |
| 3125 | D6 |
| 3126 | E6 |
| 3128 | E6 |
| 3130 | D6 |
| 3131 | D6 |
| 3132 | E5 |
| 3133 | D6 |
| 3134 | D5 |
| 3135 | D5 |
| 3136 | D5 |
| 3138 | E7 |
| 3139 | E7 |
| 3140 | E6 |
| 3141 | E6 |
| 3142 | E6 |
| 3143 | E6 |
| 3145 | E7 |
| 3146 | E7 |
| 3147 | D6 |
| 3148 | E6 |
| 3200 | F5 |
| 3202 | F5 |
| 3203 | F6 |
| 3204 | F5 |
| 3205 | F5 |
| 3206 | F6 |
| 3207 | F5 |
| 3208 | F5 |
| 3209 | F5 |
| 3212 | F6 |
| 3213 | G6 |
| 3214 | F5 |
| 3216 | F6 |
| 3217 | F6 |
| 3218 | F6 |
| 3224 | E8 |
| 3225 | E8 |
| 3226 | E8 |
| 3228 | E8 |
| 3260 | G8 |
| 3261 | G8 |
| 3262 | G8 |
| 3263 | G8 |
| 3264 | G8 |
| 3266 | G8 |
| 3267 | G8 |
| 3268 | G8 |
| 3270 | G9 |
| 3271 | G9 |
| 3272 | G8 |
| 3292 | B8 |
| 3300 | E6 |
| 3301 | E6 |
| 3302 | F8 |
| 3303 | G7 |
| 3304 | G8 |
| 3305 | G7 |
| 3306 | G7 |
| 3307 | G7 |
| 3308 | G7 |
| 3310 | G7 |
| 3311 | F9 |
| 3312 | G7 |
| 3313 | G7 |
| 3316 | G8 |
| 3317 | G7 |
| 3319 | G7 |
| 3320 | G8 |
| 3321 | G7 |
| 3322 | G8 |
| 3323 | G8 |
| 3324 | G8 |
| 3325 | F8 |
| 3326 | F8 |
| 3327 | F8 |
| 3328 | G8 |
| 3331 | G7 |
| 3332 | G8 |
| 3333 | G8 |
| 3334 | G8 |
| 3335 | G8 |
| 3339 | G7 |
| 3340 | G7 |
| 3341 | G6 |
| 3342 | G6 |
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| 3344 | G6 |
| 3345 | G6 |
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| 3348 | G7 |
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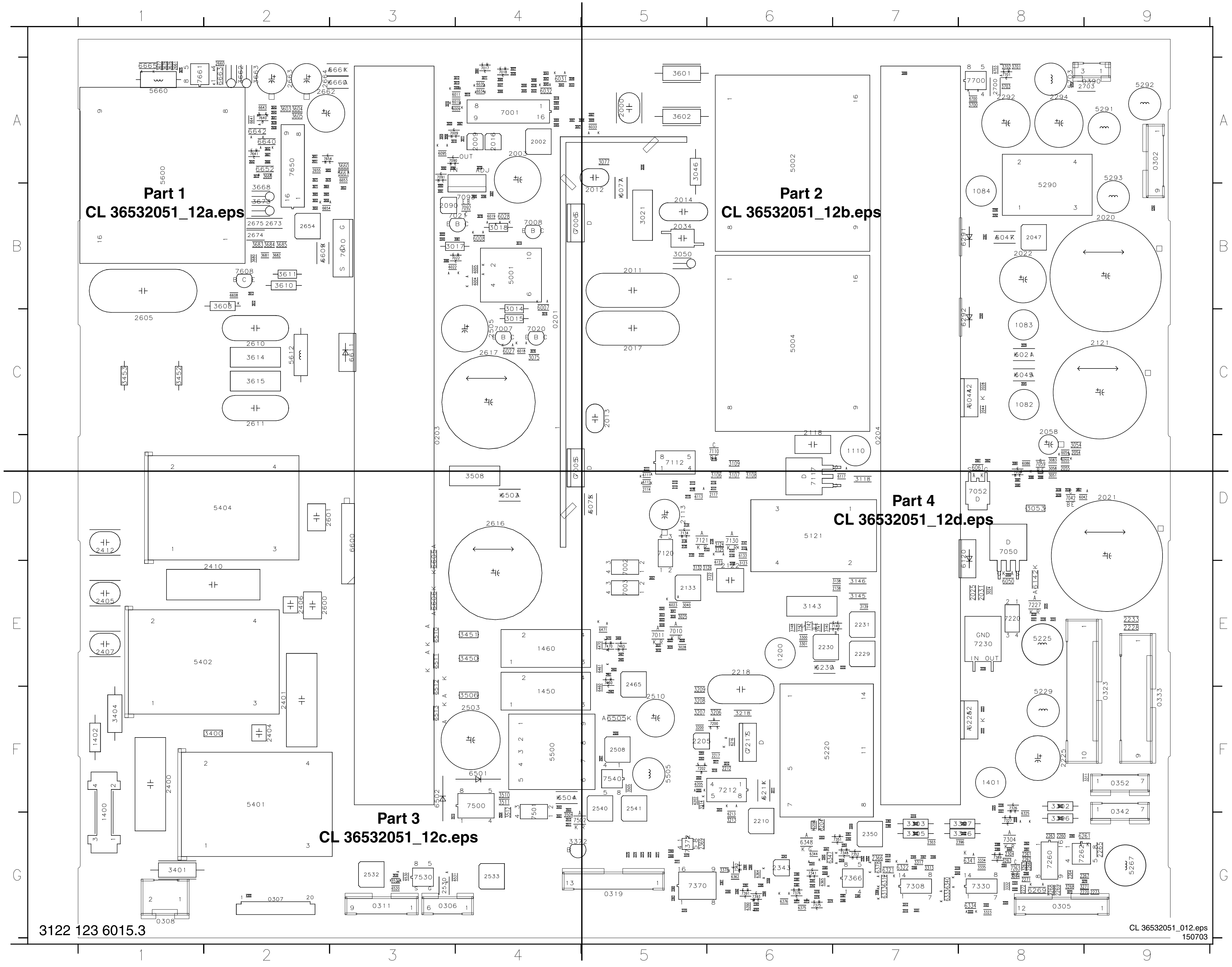
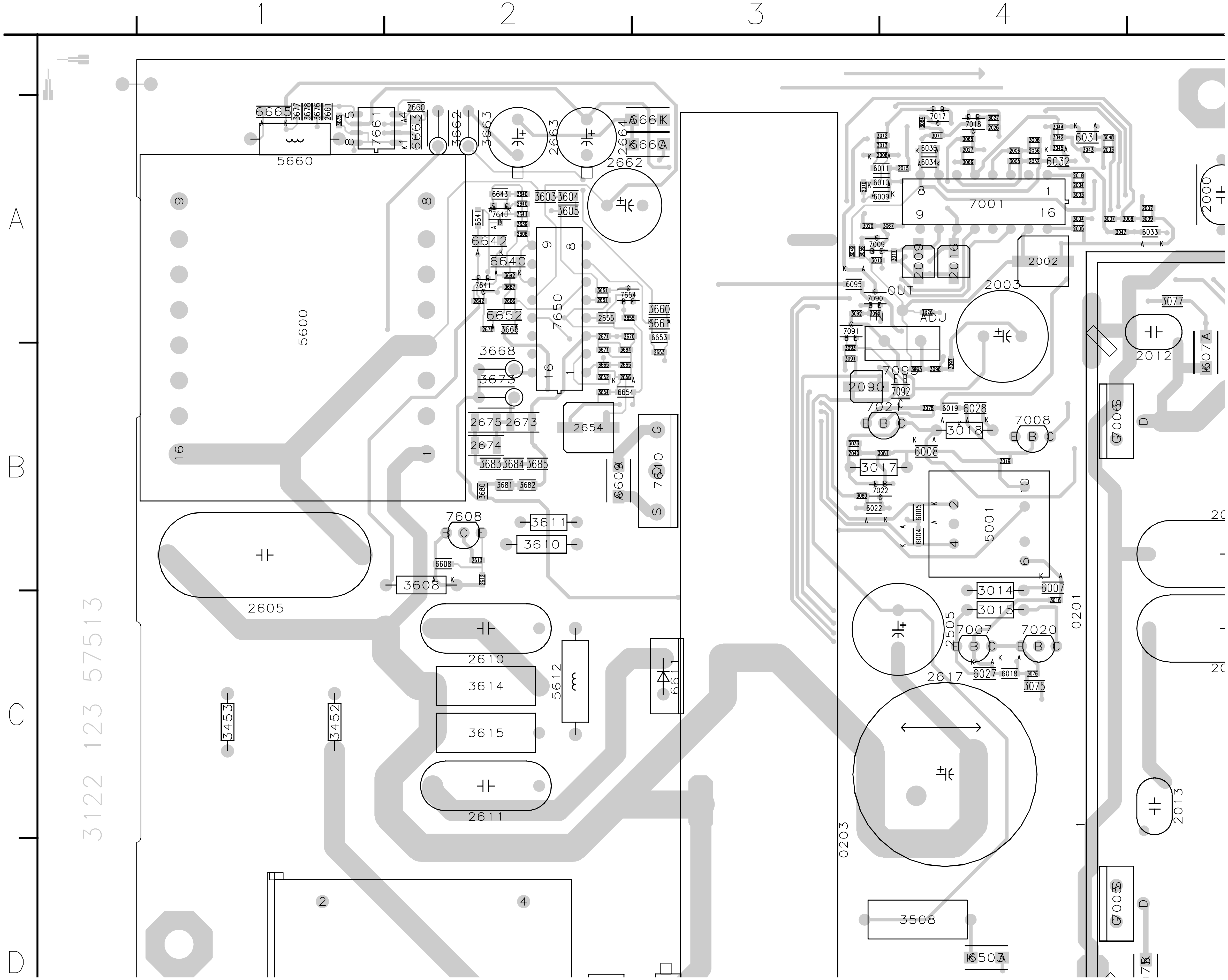
| 3352 | G7 |
| 3353 | G6 |
| 3354 | G7 |
| 3358 | G6 |
| 3359 | G6 |
| 3360 | G5 |
| 3361 | G6 |
| 3363 | G5 |
| 3364 | G6 |
| 3368 | G5 |
| 3369 | G5 |
| 3370 | G5 |
| 3371 | G5 |
| 3372 | G4 |
| 3373 | G6 |
| 3374 | G6 |
| 3376 | G6 |
| 3377 | G6 |
| 3378 | G6 |
| 3380 | G6 |
| 3381 | G6 |
| 3382 | G7 |
| 3385 | G6 |
| 3386 | G7 |
| 3387 | G7 |
| 3388 | G8 |
| 3389 | G8 |
| 3390 | G6 |
| 3391 | G6 |
| 3392 | G6 |
| 3393 | G6 |
| 3394 | G6 |
| 3395 | G6 |
| 3396 | G8 |
| 3397 | G8 |
| 3400 | F2 |
| 3401 | G1 |
| 3404 | F1 |
| 3450 | E4 |
| 3451 | E4 |
| 3452 | C1 |
| 3453 | C1 |
| 3460 | E5 |
| 3461 | E5 |
| 3463 | F5 |
| 3465 | E5 |
| 3467 | E5 |
| 3469 | E5 |
| 3470 | E5 |
| 3501 | G4 |
| 3502 | F4 |
| 3503 | F4 |
| 3504 | G4 |
| 3505 | F5 |
| 3506 | F4 |
| 3508 | D4 |
| 3510 | F4 |
| 3511 | F4 |
| 3512 | G4 |
| 3520 | G3 |
| 3530 | G3 |
| 3601 | A5 |
| 3602 | A5 |
| 3603 | A2 |
| 3604 | A2 |
| 3605 | A2 |
| 3608 | B2 |
| 3610 | B2 |
| 3611 | B2 |
| 3614 | C2 |
| 3615 | C2 |
| 3639 | A2 |
| 3640 | A2 |
| 3641 | A2 |
| 3642 | A2 |
| 3651 | A2 |
| 3652 | B2 |
| 3654 | B2 |
| 3655 | A2 |
| 3660 | A3 |
| 3661 | A3 |
| 3662 | A2 |
| 3663 | A2 |
| 3664 | B2 |
| 3665 | B2 |
| 3666 | A2 |
| 3667 | A2 |
| 3668 | B2 |
| 3671 | B2 |
| 3673 | B2 |
| 3675 | A1 |
| 3676 | A1 |
| 3677 | A1 |
| 3678 | A1 |
| 3680 | B2 |
| 3681 | B2 |
| 3682 | B2 |
| 3683 | B2 |
| 3684 | B2 |
| 3685 | B2 |
| 3700 | A8 |
| 3701 | A8 |
| 3702 | A8 |
| 3703 | A8 |
| 3800 | G8 |
| 3801 | G8 |
| 3802 | G8 |
| 3803 | F8 |
| 3804 | G7 |
| 3805 | G7 |
| 3999 | A7 |
| 4300 | G2 |
| 5001 | B4 |
| 5002 | A6 |
| 5004 | C6 |
| 5121 | D6 |
| 5220 | F6 |
| 5225 | E8 |
| 5229 | F8 |
| 5267 | G9 |
| 5290 | B8 |
| 5291 | A9 |
| 5292 | A9 |
| 5293 | A9 |
| 5294 | B9 |
| 5401 | F2 |
| 5402 | E1 |
| 5404 | D2 |
| 5500 | F4 |
| 5505 | F5 |
| 5600 | A1 |
| 5612 | C2 |
| 5660 | A1 |
| 5703 | A8 |
| 5704 | A8 |
| 6004 | B4 |
| 6005 | B4 |
| 6007 | B4 |
| 6008 | B4 |
| 6009 | A4 |
| 6010 | A4 |
| 6011 | A4 |
| 6018 | C4 |
| 6019 | B4 |
| 6021 | C8 |
| 6022 | B3 |
| 6023 | E5 |
| 6027 | C4 |
| 6028 | B4 |
| 6031 | A4 |
| 6032 | A4 |
| 6033 | A5 |
| 6034 | A4 |
| 6035 | A4 |
| 6042 | D8 |
| 6044 | C8 |
| 6045 | C8 |
| 6047 | B8 |
| 6050 | E8 |
| 6054 | D8 |
| 6055 | D8 |
| 6061 | D8 |
| 6075 | D5 |
| 6077 | B5 |
| 6086 | D8 |
| 6095 | A3 |
| 6111 | D5 |
| 6112 | D5 |
| 6113 | D5 |
| 6117 | D7 |
| 6120 | D8 |
| 6123 | E6 |
| 6133 | D6 |
| 6142 | E8 |
| 6202 | F5 |
| 6204 | G6 |
| 6205 | F5 |
| 6206 | G6 |
| 6211 | F6 |
| 6213 | G6 |
| 6216 | F6 |
| 6225 | F8 |
| 6230 | E6 |
| 6261 | G9 |
| 6269 | G8 |
| 6291 | B8 |
| 6292 | C8 |
| 6312 | G7 |
| 6313 | G7 |
| 6321 | G7 |
| 6322 | G7 |
| 6325 | G8 |
| 6333 | G7 |
| 6334 | G8 |
| 6340 | G7 |
| 6341 | G8 |
| 6344 | G6 |
| 6347 | G6 |
| 6348 | G6 |
| 6362 | G6 |
| 6364 | G6 |
| 6365 | G6 |
| 6375 | G6 |
| 6376 | G6 |
| 6378 | G7 |
| 6390 | G6 |
| 6460 | F5 |
| 6461 | E5 |
| 6470 | E5 |
| 6471 | E5 |
| 6501 | F4 |
| 6502 | F3 |
| 6503 | D4 |
| 6504 | F4 |
| 6505 | F5 |
| 6510 | E3 |
| 6511 | E3 |
| 6512 | F3 |
| 6513 | F3 |
| 6520 | G3 |
| 6530 | G3 |
| 6531 | G3 |
| 6600 | D3 |
| 6605 | D3 |
| 6606 | E3 |
| 6608 | B2 |
| 6609 | B2 |
| 6611 | C3 |
| 6640 | A2 |
| 6641 | A2 |
| 6642 | A2 |
| 6643 | A2 |
| 6652 | A2 |
| 6653 | A3 |
| 6654 | B2 |
| 6660 | A3 |
| 6661 | A3 |
| 6663 | A2 |
| 6665 | A1 |
| 6700 | A8 |
| 6703 | A8 |
| 7001 | A4 |
| 7002 | E5 |
| 7003 | E5 |
| 7005 | D4 |
| 7006 | B4 |
| 7007 | C4 |
| 7008 | B4 |
| 7009 | A3 |
| 7010 | E5 |
| 7011 | E5 |
| 7017 | A4 |
| 7018 | A4 |
| 7020 | C4 |
| 7021 | B4 |
| 7022 | B4 |
| 7042 | D8 |
| 7050 | D8 |
| 7052 | D8 |
| 7058 | D8 |
| 7059 | D8 |
| 7090 | A3 |
| 7091 | A3 |
| 7092 | B4 |
| 7093 | B4 |
| 7110 | D6 |
| 7112 | D5 |
| 7117 | D6 |
| 7120 | D5 |
| 7121 | D5 |
| 7130 | D6 |
| 7134 | D5 |
| 7140 | E7 |
| 7142 | E6 |
| 7200 | F6 |
| 7202 | F5 |
| 7212 | F6 |
| 7217 | F6 |
| 7220 | E8 |
| 7227 | E8 |
| 7230 | E8 |
| 7260 | G8 |
| 7262 | G8 |
| 7263 | G8 |
| 7304 | G8 |
| 7308 | G7 |
| 7326 | F8 |
| 7327 | G8 |
| 7330 | G8 |
| 7341 | G6 |
| 7348 | G7 |
| 7351 | G7 |
| 7352 | G7 |
| 7362 | G6 |
| 7366 | G7 |
| 7370 | G5 |
| 7372 | G5 |
| 7375 | G6 |
| 7376 | G6 |
| 7389 | G8 |
| 7391 | G6 |
| 7393 | G6 |
| 7460 | E5 |
| 7465 | E5 |
| 7470 | E5 |
| 7500 | F4 |
| 7501 | F4 |
| 7502 | G4 |
| 7530 | G3 |
| 7540 | F5 |
| 7608 | B2 |
| 7610 | B3 |
| 7640 | A2 |
| 7641 | A2 |
| 7650 | A2 |
| 7654 | A2 |
| 7661 | A1 |
| 7700 | A8 |
| 7701 | A8 |

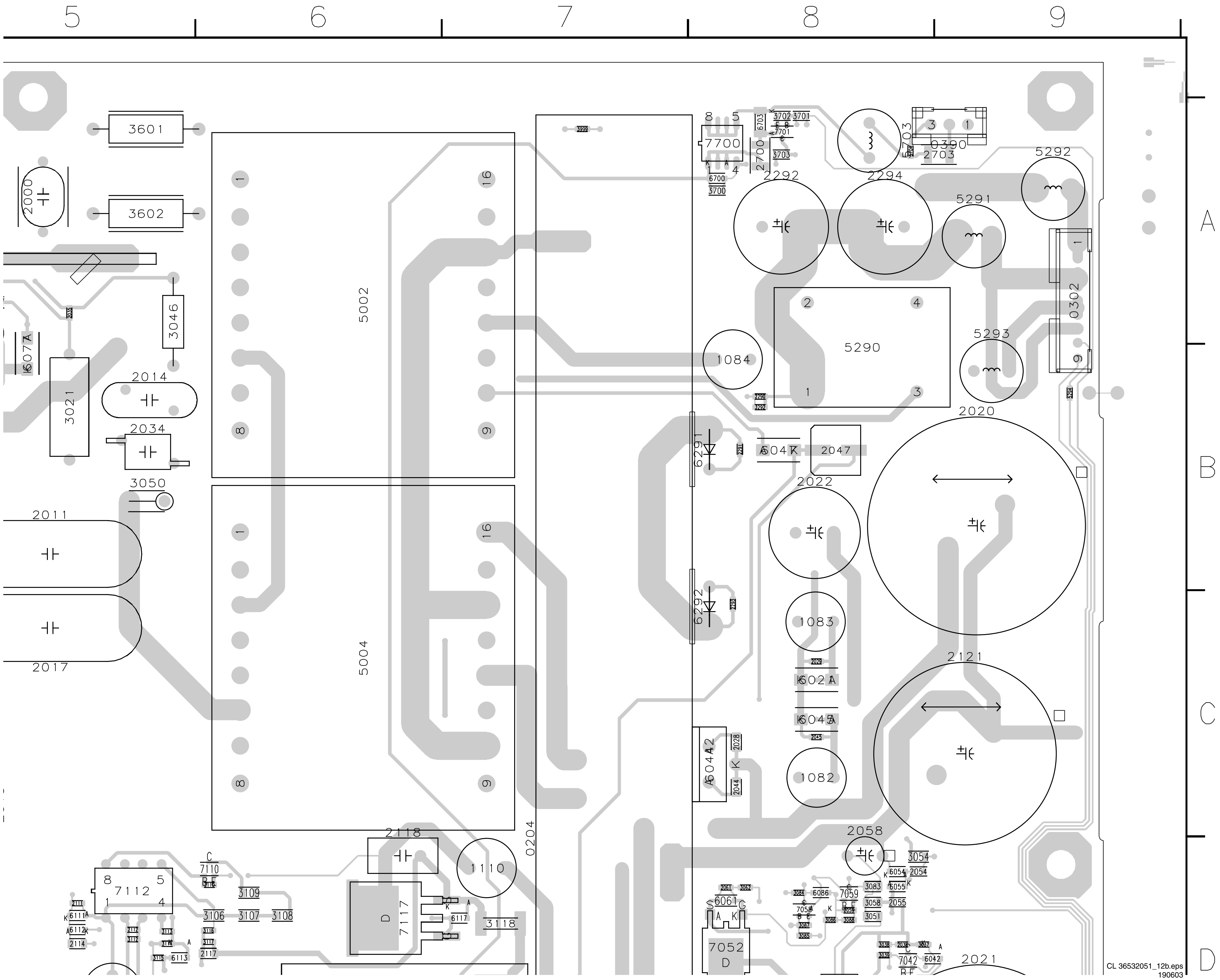


## Layout Power Supply Panel (FM33 AA) (Part 1 Top Side)


1
2
3
4
A
B
C
D
3122 123 57513
6665
5660
7661
6663
2660
3662
3663
2663
2664
6661
6660
2662
5600
9
8
16
1
6643
7640
6641
6642
6640
3603
3604
3605
7641
6652
3666
7650
3668
3673
7654
3660
6661
6653
6654
2675
2673
2674
2654
3683
3684
3685
3681
3682
3680
6609
7610
G
D
S
7608
B C E
3611
3610
6608
3608
2605
2610
3614
5612
6611
3615
2611
3453
3452
2
4
7017
7018
6031
6032
6035
6034
6011
6010
6009
7001
8
1
9
16
2007
6033
7009
2009
2016
2002
6095
OUT
7090
IN
ADJ
2003
7091
709
7092
2090
702
E B C
6019
6028
7008
3018
6008
3017
7022
6022
6005
6004
5001
10
3014
6007
3015
0201
2505
7007
7020
6027
6018
3075
2617
0203
3508
6507
2000
3077
2012
6077
7006
2013
7005
D

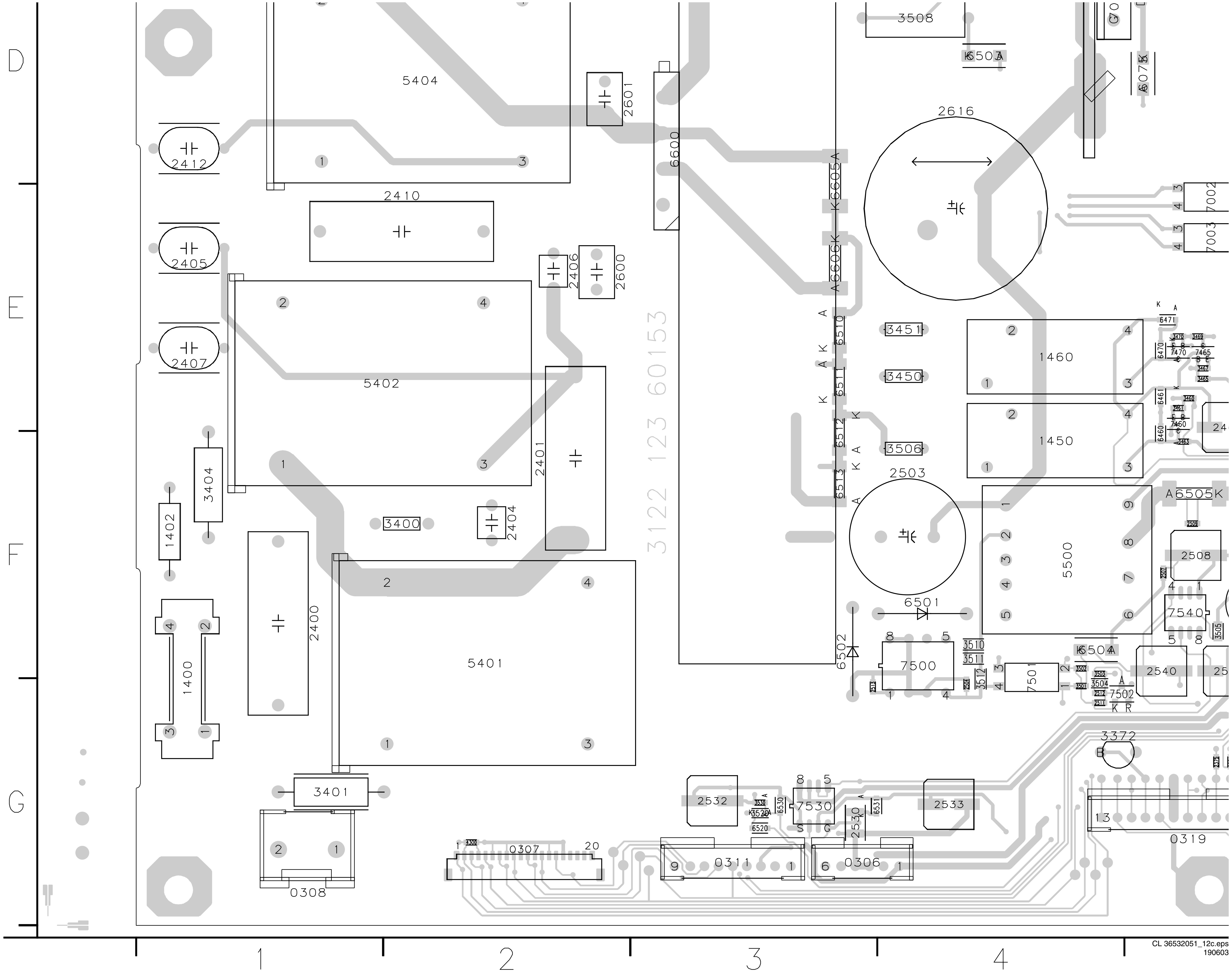
CL 36532051_12a.eps
190603

## Layout Power Supply Panel (FM33 AA) (Part 2 Top Side)


5
6
7
8
9
A
B
C
D
3601
3602
2000
3046
3021
2014
2034
3050
2011
2017
5002
5004
1
16
8
9
0204
7700
3702
3701
6703
7701
2700
3703
6700
3700
2292
2294
0390
2703
5703
5292
5291
0302
5290
5293
1084
6291
6047
2047
2020
2022
6292
1083
2121
6021
6045
6044
2028
2044
1082
2058
3054
2054
6054
6055
3083
2055
3058
3051
7059
6086
6061
7058
7052
2118
1110
7117
6117
3118
7112
7110
3109
3106
3107
3108
6111
6112
2114
2117
6113
7042
6042
2021

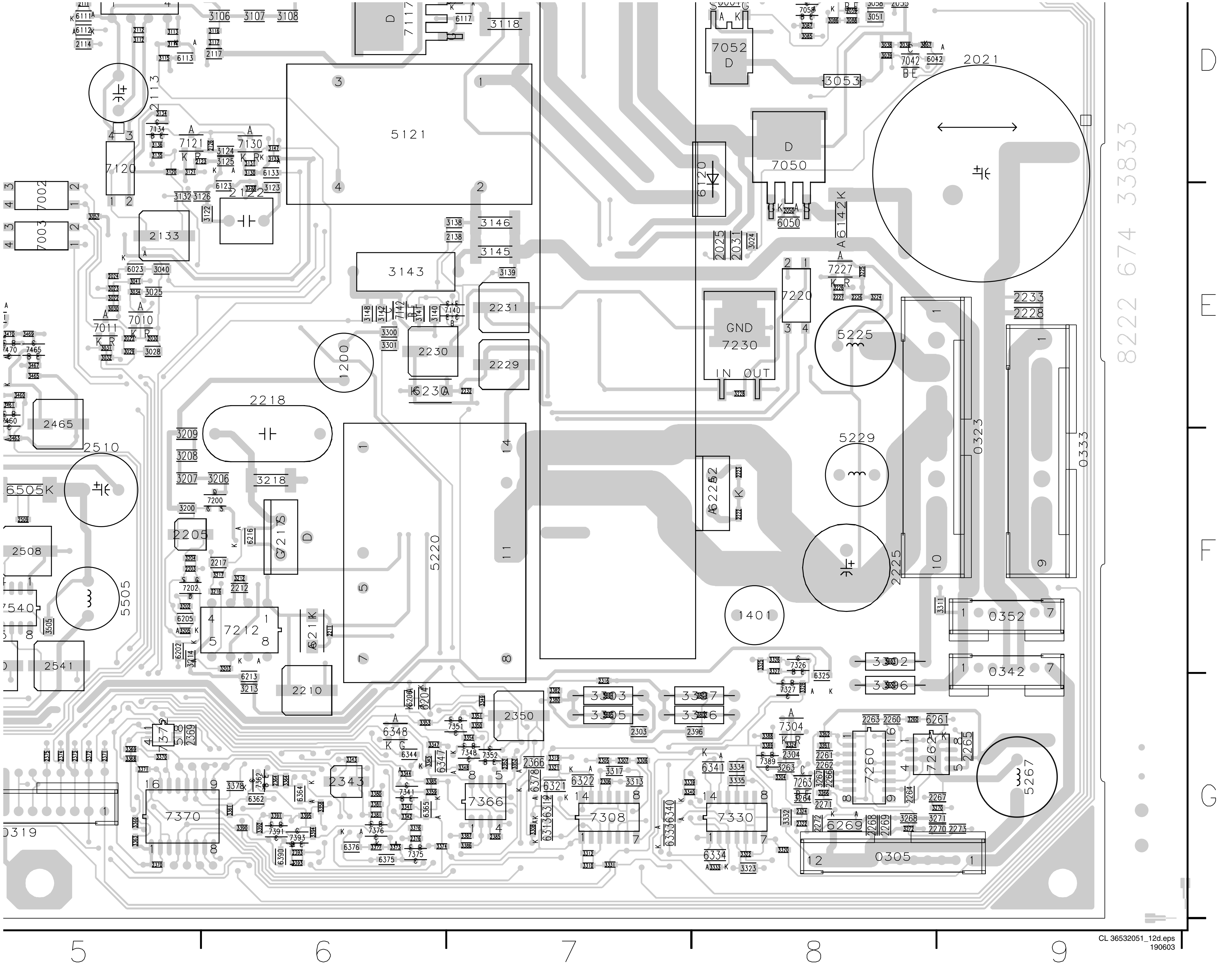
CL 36532051_12b.eps
190603

## Layout Power Supply Panel (FM33 AA) (Part 3 Top Side)


D
E
F
G
1
2
3
4
5404
2601
6600
3508
6503
6075
2616
2412
2410
2405
2406
2600
2407
5402
6605
6606
6510
6511
6512
6513
3451
3450
3506
1460
1450
7002
7003
6471
7470
7465
6470
6461
7460
6460
2503
A6505K
2508
5500
7540
2401
3404
1402
3400
2404
2400
1400
5401
6501
6502
7500
3510
3511
3512
7501
6504
2540
7502
3372
3401
0308
0307
2532
7530
2530
6531
6520
2533
0311
0306
0319
3122 123 60153

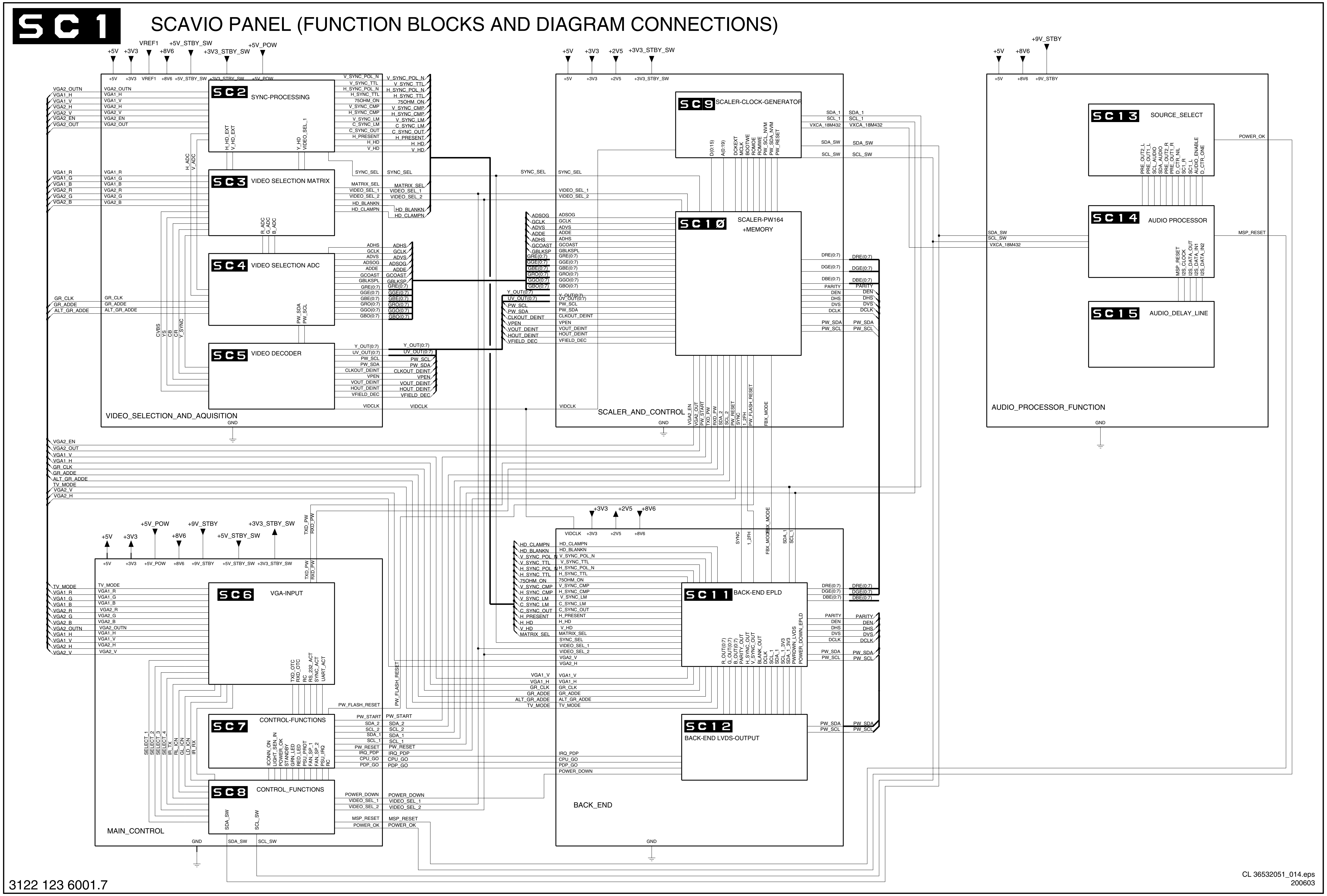
CL 36532051_12c.eps
190603

## Layout Power Supply Panel (FM33 AA) (Part 4 Top Side)


D
E
F
G
5
6
7
8
9
8222 674 33833
5121
7117
3118
3106
3107
3108
7052
3053
2021
7050
6050
6120
7120
7121
7130
7002
7003
2113
2122
2133
3143
3146
3145
2231
2230
2229
1200
6230
7220
7230
GND
IN
OUT
5225
5229
2233
2228
0323
0333
7011
7010
2465
2218
2510
6505
3209
3208
3207
3206
3218
5220
6225
2205
7217
2508
5505
7540
2541
7212
6211
2210
1401
2225
0352
0342
3302
3306
3303
3305
3307
3306
2350
6348
2343
2366
6321
6322
7308
6341
7330
7304
7263
7260
7262
2265
6261
5267
6269
0305
7370
7366
0319
6334
3323

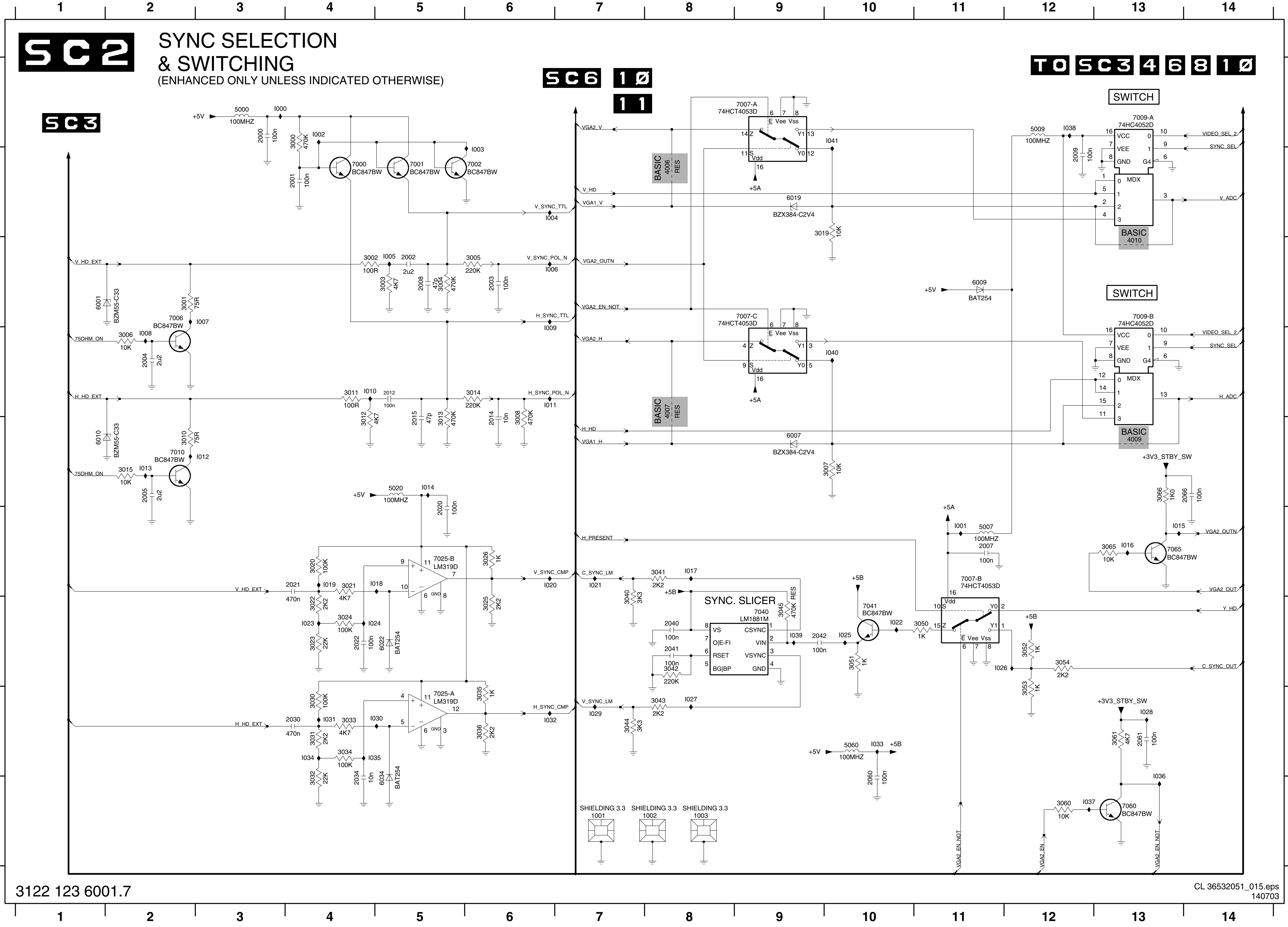
CL 36532051_12d.eps
190603

## SCAVIO Panel: Function Blocks and Diagram Connections


SC1
SCAVIO PANEL (FUNCTION BLOCKS AND DIAGRAM CONNECTIONS)
+5V
+3V3
VREF1
+8V6
+5V_STBY_SW
+3V3_STBY_SW
+5V_POW
+2V5
+9V_STBY
SC2 SYNC-PROCESSING
SC3 VIDEO SELECTION MATRIX
SC4 VIDEO SELECTION ADC
SC5 VIDEO DECODER
VIDEO_SELECTION_AND_AQUISITION
SC9 SCALER-CLOCK-GENERATOR
SC10 SCALER-PW164 +MEMORY
SCALER_AND_CONTROL
SC13 SOURCE_SELECT
SC14 AUDIO PROCESSOR
SC15 AUDIO_DELAY_LINE
AUDIO_PROCESSOR_FUNCTION
SC6 VGA-INPUT
SC7 CONTROL-FUNCTIONS
SC8 CONTROL_FUNCTIONS
MAIN_CONTROL
SC11 BACK-END EPLD
SC12 BACK-END LVDS-OUTPUT
BACK_END
GND
VGA2_OUTN
VGA1_H
VGA1_V
VGA2_H
VGA2_V
VGA2_EN
VGA2_OUT
VGA1_R
VGA1_G
VGA1_B
VGA2_R
VGA2_G
VGA2_B
GR_CLK
GR_ADDE
ALT_GR_ADDE
TV_MODE
V_SYNC_POL_N
V_SYNC_TTL
H_SYNC_POL_N
H_SYNC_TTL
75OHM_ON
V_SYNC_CMP
H_SYNC_CMP
V_SYNC_LM
C_SYNC_LM
C_SYNC_OUT
H_PRESENT
H_HD
V_HD
H_HD_EXT
V_HD_EXT
VIDEO_SEL_1
VIDEO_SEL_2
H_ADC
V_ADC
SYNC_SEL
MATRIX_SEL
HD_BLANKN
HD_CLAMPN
R_ADC
G_ADC
B_ADC
ADHS
GCLK
ADVS
ADSOG
ADDE
GCOAST
GBLKSPL
GRE(0:7)
GGE(0:7)
GBE(0:7)
GRO(0:7)
GGO(0:7)
GBO(0:7)
PW_SDA
PW_SCL
CVBS
YS
CB
CR
Y_SYNC
Y_OUT(0:7)
UV_OUT(0:7)
CLKOUT_DEINT
VPEN
VOUT_DEINT
HOUT_DEINT
VFIELD_DEC
VIDCLK
SDA_1
SCL_1
VXCA_18M432
SDA_SW
SCL_SW
D(0:15)
A(0:19)
DCKEXT
MCLK
BOOTWE
ROMOE
ROMWE
PW_SCL_NVM
PW_SDA_NVM
PW_RESET
DRE(0:7)
DGE(0:7)
DBE(0:7)
PARITY
DEN
DHS
DVS
DCLK
VGA2_EN
VGA2_OUT
PW_START
TXD_PW
RXD_PW
SDA_2
SCL_2
SYNC
1_2FH
PW_FLASH_RESET
FBX_MODE
POWER_OK
MSP_RESET
PRE_OUT2_L
PRE_OUT1_L
SCL_AUDIO
SDA_AUDIO
PRE_OUT2_R
PRE_OUT1_R
D_CTR_NL
SC1_R
SC1_L
AUDIO_ENABLE
D_CTR_ONE
I2S_CLOCK
I2S_DATA_OUT
I2S_DATA_IN1
I2S_DATA_IN2
TXD_OTC
RXD_OTC
RC
RS_232_ACT
SYNC_ACT
UART_ACT
IRQ_PDP
CPU_GO
PDP_GO
ICONN_ON
LIGHT_SEN_IN
POWER_OK
STANDBY
GRN_LED
RED_LED
PSU_PROT
FAN_SP_1
FAN_SP_2
PSU_IRQ
SELECT_1
SELECT_2
SELECT_3
SELECT_4
IR_TX
RL_ICN
GL_ICN
LD_ICN
IR_RX
POWER_DOWN
R_OUT(0:7)
G_OUT(0:7)
B_OUT(0:7)
PARITY_OUT
H_SYNC_OUT
V_SYNC_OUT
BLANK_OUT
SCL_1_3V3
SDA_1_3V3
PWRDWN_LVDS
POWER_DOWN_EPLD
CL 36532051_014.eps
200603

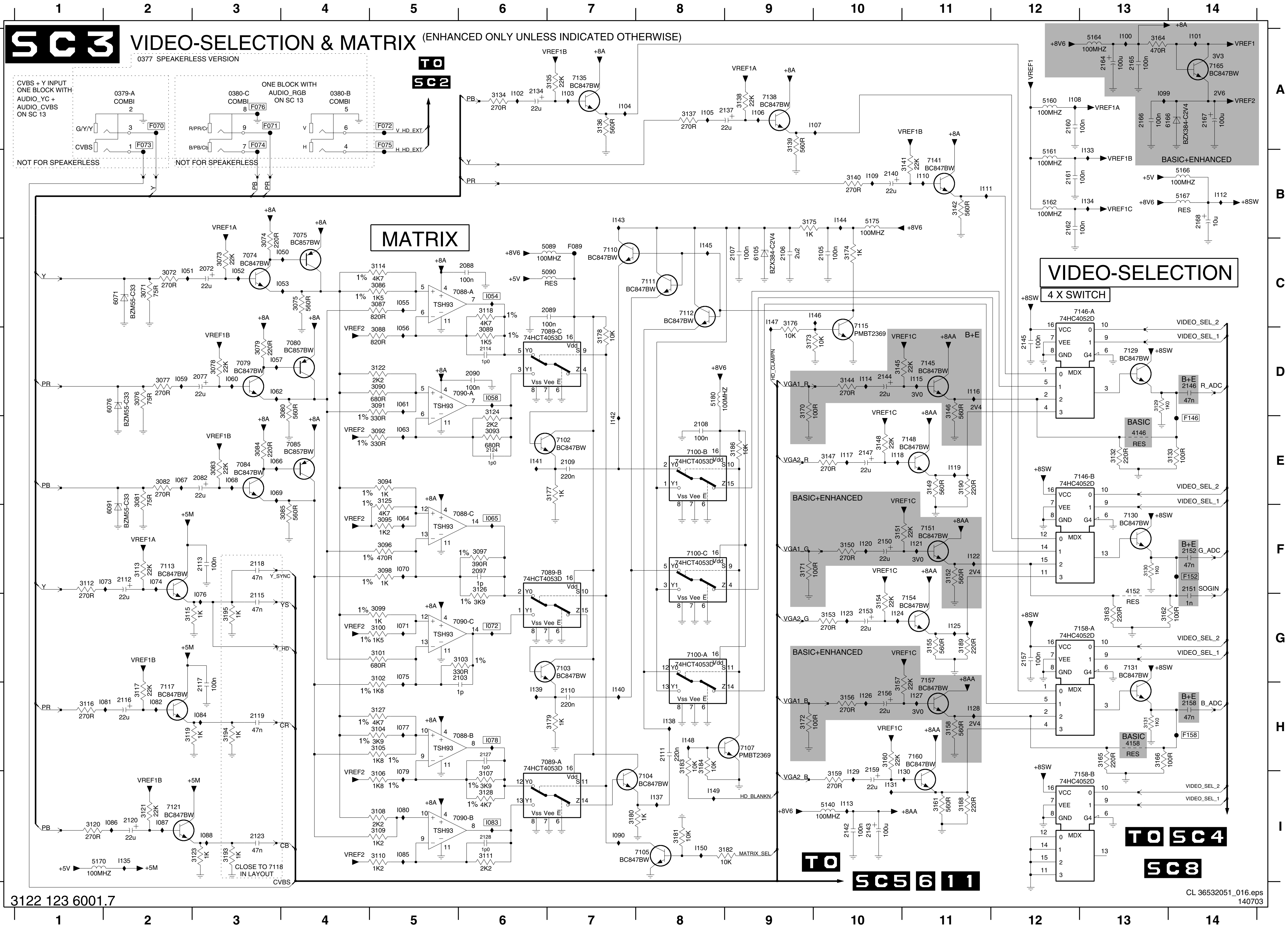
3122 123 6001.7

## SCAVIO Panel: Sync Selection & Switching


SC2
SYNC SELECTION & SWITCHING
(ENHANCED ONLY UNLESS INDICATED OTHERWISE)
SC6 10 11
TO SC3 4 6 8 10
SC3
SWITCH
SYNC. SLICER
7007-A 74HCT4053D
7007-B 74HCT4053D
7007-C 74HCT4053D
7009-A 74HC4052D
7009-B 74HC4052D
7025-A LM319D
7025-B LM319D
7040 LM1881M
7000 BC847BW
7001 BC847BW
7002 BC847BW
7006 BC847BW
7010 BC847BW
7041 BC847BW
7060 BC847BW
7065 BC847BW
6001 BZM55-C33
6010 BZM55-C33
6019 BZX384-C2V4
6007 BZX384-C2V4
6009 BAT254
6022 BAT254
6034 BAT254
BASIC 4006 RES
BASIC 4007 RES
BASIC 4010
BASIC 4009
V_HD_EXT
75OHM_ON
H_HD_EXT
V_SYNC_TTL
V_SYNC_POL_N
H_SYNC_TTL
H_SYNC_POL_N
V_SYNC_CMP
H_SYNC_CMP
VGA2_V
V_HD
VGA1_V
VGA2_OUTN
VGA2_EN_NOT
VGA2_H
H_HD
VGA1_H
H_PRESENT
C_SYNC_LM
V_SYNC_LM
VIDEO_SEL_2
SYNC_SEL
V_ADC
H_ADC
VGA2_OUT
Y_HD
C_SYNC_OUT
VGA2_EN
+3V3_STBY_SW
+5V
+5A
+5B
SHIELDING 3.3 1001
SHIELDING 3.3 1002
SHIELDING 3.3 1003
3122 123 6001.7
CL 36532051_015.eps
140703

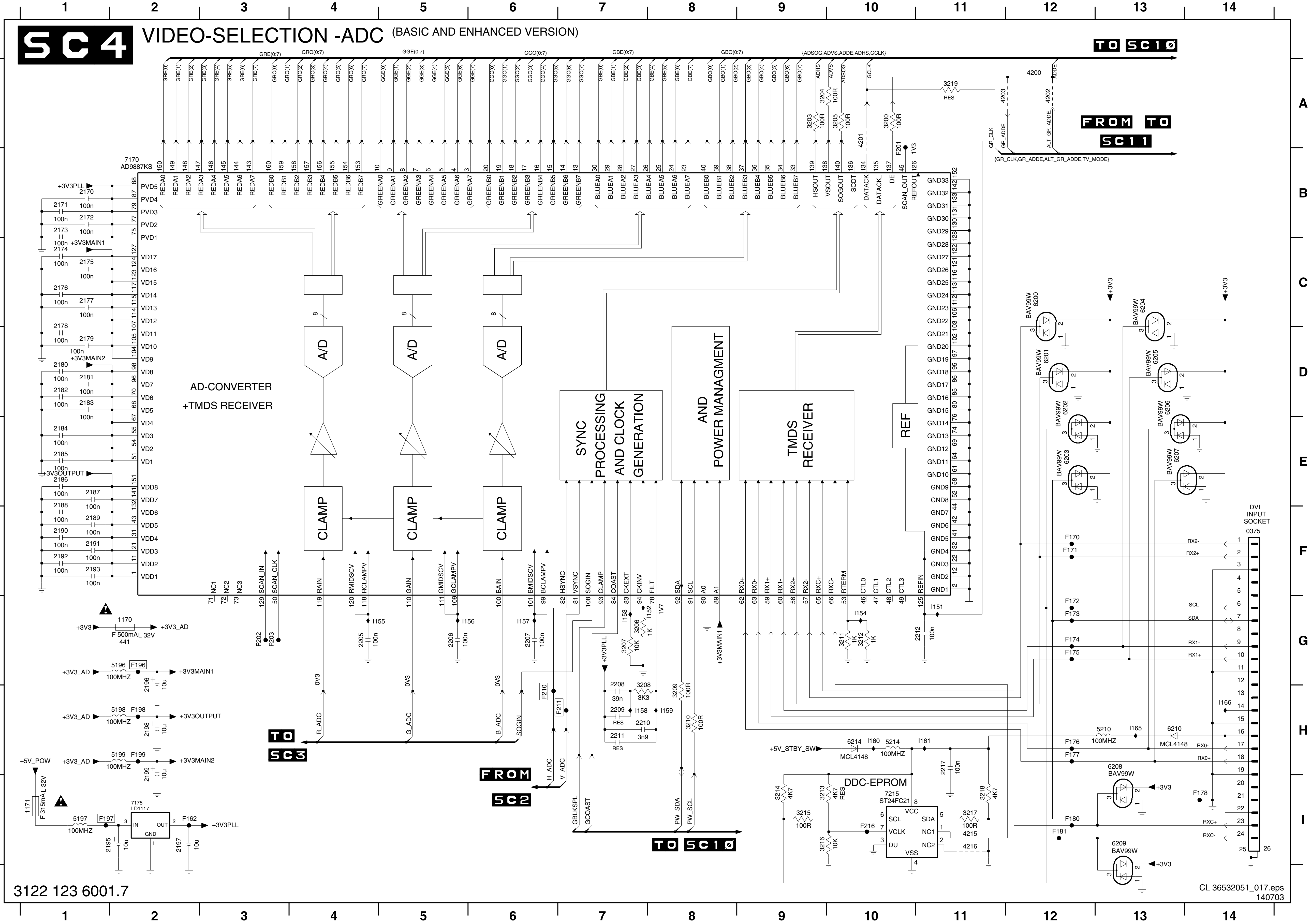
| | |
|---|---|
| 1001 | I7 |
| 1002 | I7 |
| 1003 | I8 |
| 2000 | A3 |
| 2001 | B4 |
| 2002 | C5 |
| 2003 | C6 |
| 2004 | D2 |
| 2005 | E2 |
| 2007 | F11 |
| 2008 | C5 |
| 2009 | B12 |
| 2012 | D5 |
| 2014 | E6 |
| 2015 | E5 |
| 2020 | F5 |
| 2021 | F4 |
| 2022 | G4 |
| 2030 | H4 |
| 2034 | I4 |
| 2040 | G8 |
| 2041 | G8 |
| 2042 | G9 |
| 2060 | I10 |
| 2061 | H13 |
| 2066 | E14 |
| 3000 | A4 |
| 3001 | C2 |
| 3002 | C4 |
| 3003 | C5 |
| 3004 | C5 |
| 3005 | C6 |
| 3006 | D2 |
| 3007 | E10 |
| 3008 | E6 |
| 3010 | E2 |
| 3011 | D4 |
| 3012 | E4 |
| 3013 | E5 |
| 3014 | D6 |
| 3015 | E2 |
| 3019 | B9 |
| 3020 | F4 |
| 3021 | F4 |
| 3022 | G4 |
| 3023 | G4 |
| 3024 | G4 |
| 3025 | G6 |
| 3026 | F6 |
| 3030 | H4 |
| 3031 | H4 |
| 3032 | I4 |
| 3033 | H4 |
| 3034 | H4 |
| 3035 | H6 |
| 3036 | H6 |
| 3040 | G7 |
| 3041 | F8 |
| 3042 | G8 |
| 3043 | H8 |
| 3044 | H7 |
| 3045 | G9 |
| 3050 | G11 |
| 3051 | G10 |
| 3052 | G12 |
| 3053 | H12 |
| 3054 | G12 |
| 3060 | I12 |
| 3061 | H13 |
| 3065 | F13 |
| 3066 | E13 |
| 4006 | B8 |
| 4007 | D8 |
| 4009 | E13 |
| 4010 | C13 |
| 5000 | A3 |
| 5007 | F11 |
| 5009 | A12 |
| 5020 | E5 |
| 5060 | H10 |
| 6001 | C1 |
| 6007 | E9 |
| 6009 | C11 |
| 6010 | E1 |
| 6019 | B9 |
| 6022 | G5 |
| 6034 | I5 |
| 7000 | B4 |
| 7001 | B5 |
| 7002 | B6 |
| 7006 | C2 |
| 7007-A | A9 |
| 7007-B | F11 |
| 7007-C | C9 |
| 7009-A | A13 |
| 7009-B | C13 |
| 7010 | E2 |
| 7025-A | H5 |
| 7025-B | F5 |
| 7040 | G9 |
| 7041 | G10 |
| 7060 | I13 |
| 7065 | F13 |
| I000 | A3 |
| I001 | F11 |
| I002 | A4 |
| I003 | B6 |
| I004 | B6 |
| I005 | C5 |
| I006 | C6 |
| I007 | C3 |
| I008 | D2 |
| I009 | D6 |
| I010 | D4 |
| I011 | D6 |
| I012 | E3 |
| I013 | E2 |
| I014 | E5 |
| I015 | F13 |
| I016 | F13 |
| I017 | F8 |
| I018 | F5 |
| I019 | F4 |
| I020 | F6 |
| I021 | F7 |
| I022 | G10 |
| I023 | G4 |
| I024 | G4 |
| I025 | G10 |
| I026 | G11 |
| I027 | H8 |
| I028 | H13 |
| I029 | H7 |
| I030 | H5 |
| I031 | H4 |
| I032 | H6 |
| I033 | H10 |
| I034 | H4 |
| I035 | H4 |
| I036 | H13 |
| I037 | I12 |
| I038 | A12 |
| I039 | G9 |
| I040 | D10 |
| I041 | A10 |

## SCAVIO Panel: Video Selection & Matrix


SC3
VIDEO-SELECTION & MATRIX (ENHANCED ONLY UNLESS INDICATED OTHERWISE)
0377 SPEAKERLESS VERSION
CVBS + Y INPUT ONE BLOCK WITH AUDIO_YC + AUDIO_CVBS ON SC 13
0379-A COMBI
ONE BLOCK WITH AUDIO_RGB ON SC 13
0380-C COMBI
0380-B COMBI
NOT FOR SPEAKERLESS
V_HD_EXT
H_HD_EXT
TO SC2
MATRIX
VIDEO-SELECTION
4 X SWITCH
BASIC+ENHANCED
B+E
BASIC
RES
VGA1_R
VGA2_R
VGA1_G
VGA2_G
VGA1_B
VGA2_B
VIDEO_SEL_2
VIDEO_SEL_1
R_ADC
G_ADC
B_ADC
SOGIN
HD_CLAMPN
HD_BLANKN
MATRIX_SEL
Y_SYNC
CLOSE TO 7118 IN LAYOUT
CVBS
TO SC4 SC8
TO SC5 6 11
3122 123 6001.7
CL 36532051_016.eps
140703

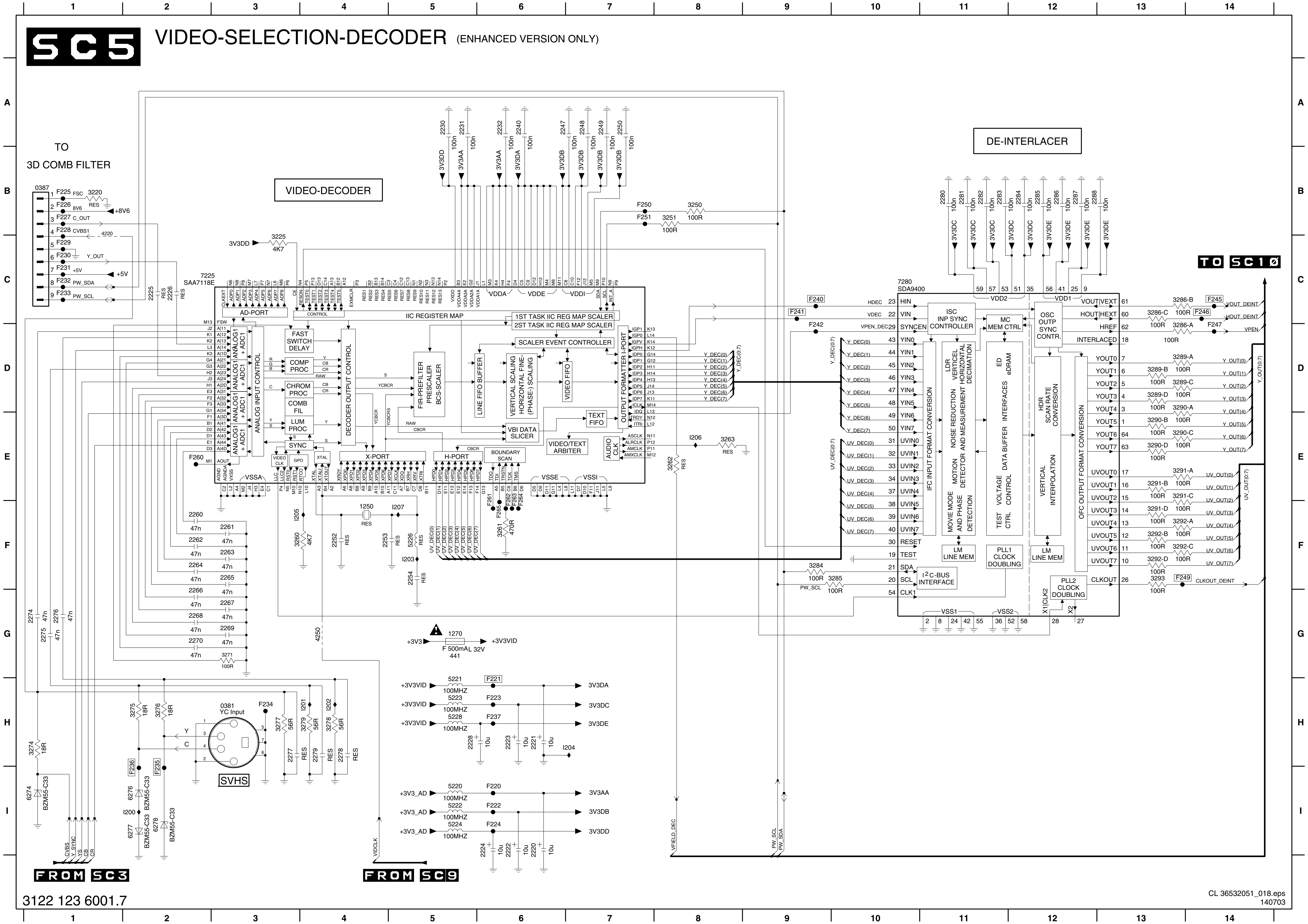
| | |
|---|---|
| 0377 | A2 |
| 0379-A | A2 |
| 0380-B | A4 |
| 0380-C | A3 |
| 2072 | C3 |
| 2077 | D3 |
| 2082 | E3 |
| 2088 | C6 |
| 2089 | C7 |
| 2090 | D6 |
| 2097 | F6 |
| 2103 | G6 |
| 2105 | C10 |
| 2106 | C9 |
| 2107 | C9 |
| 2108 | E8 |
| 2109 | E7 |
| 2110 | H7 |
| 2111 | H8 |
| 2112 | F2 |
| 2113 | F3 |
| 2114 | D6 |
| 2115 | G3 |
| 2116 | H2 |
| 2117 | H3 |
| 2118 | F3 |
| 2119 | H3 |
| 2120 | I2 |
| 2123 | I3 |
| 2124 | E6 |
| 2127 | H6 |
| 2128 | I6 |
| 2134 | A6 |
| 2137 | A9 |
| 2140 | B10 |
| 2142 | I10 |
| 2143 | I10 |
| 2144 | D10 |
| 2145 | D12 |
| 2146 | D14 |
| 2147 | E10 |
| 2150 | F10 |
| 2151 | F14 |
| 2152 | F14 |
| 2153 | G10 |
| 2156 | H10 |
| 2157 | G12 |
| 2158 | H14 |
| 2159 | I10 |
| 2160 | A12 |
| 2161 | B12 |
| 2162 | B12 |
| 2164 | A13 |
| 2165 | A13 |
| 2166 | A13 |
| 2167 | A14 |
| 2168 | B14 |
| 3071 | C2 |
| 3072 | C2 |
| 3073 | C3 |
| 3074 | C3 |
| 3075 | C4 |
| 3076 | D2 |
| 3077 | D2 |
| 3078 | D3 |
| 3079 | D3 |
| 3080 | D4 |
| 3081 | E2 |
| 3082 | E2 |
| 3083 | E3 |
| 3084 | E3 |
| 3085 | F4 |
| 3086 | C5 |
| 3087 | C5 |
| 3088 | D5 |
| 3089 | D6 |
| 3090 | D5 |
| 3091 | D5 |
| 3092 | E5 |
| 3093 | E6 |
| 3094 | E5 |
| 3095 | F5 |
| 3096 | F5 |
| 3097 | F6 |
| 3098 | F5 |
| 3099 | G5 |
| 3100 | G5 |
| 3101 | G5 |
| 3102 | G5 |
| 3103 | G6 |
| 3104 | H5 |
| 3105 | H5 |
| 3106 | I5 |
| 3107 | I6 |
| 3108 | I5 |
| 3109 | I5 |
| 3110 | I5 |
| 3111 | I6 |
| 3112 | F1 |
| 3113 | F2 |
| 3114 | C5 |
| 3115 | G2 |
| 3116 | H1 |
| 3117 | H2 |
| 3118 | C6 |
| 3119 | H2 |
| 3120 | I1 |
| 3121 | I2 |
| 3122 | D5 |
| 3123 | I3 |
| 3124 | D6 |
| 3125 | E5 |
| 3126 | F6 |
| 3127 | H5 |
| 3128 | I6 |
| 3129 | D13 |
| 3130 | F13 |
| 3131 | H13 |
| 3132 | E13 |
| 3133 | E14 |
| 3134 | A6 |
| 3135 | A7 |
| 3136 | A7 |
| 3137 | A8 |
| 3138 | A9 |
| 3139 | A9 |
| 3140 | B10 |
| 3141 | B11 |
| 3142 | B11 |
| 3144 | D10 |
| 3145 | D10 |
| 3146 | D11 |
| 3147 | E10 |
| 3148 | E10 |
| 3149 | E11 |
| 3150 | F10 |
| 3151 | F10 |
| 3152 | F11 |
| 3153 | G10 |
| 3154 | G10 |
| 3155 | G11 |
| 3156 | H10 |
| 3157 | H10 |
| 3158 | H11 |
| 3159 | I10 |
| 3160 | H10 |
| 3161 | I11 |
| 3162 | G13 |
| 3163 | G13 |
| 3164 | A13 |
| 3165 | H13 |
| 3166 | H13 |
| 3170 | D9 |
| 3171 | F9 |
| 3172 | H9 |
| 3173 | D9 |
| 3174 | C10 |
| 3175 | B9 |
| 3176 | C9 |
| 3177 | E7 |
| 3178 | D7 |
| 3179 | H7 |
| 3180 | I7 |
| 3181 | I8 |
| 3182 | I9 |
| 3183 | H8 |
| 3184 | H8 |
| 3186 | E9 |
| 3188 | I11 |
| 3189 | G11 |
| 3190 | E11 |
| 3193 | I3 |
| 3194 | H3 |
| 3195 | G3 |
| 4146 | E13 |
| 4152 | G13 |
| 4158 | H13 |
| 5089 | C7 |
| 5090 | C7 |
| 5140 | I10 |
| 5160 | A12 |
| 5161 | B12 |
| 5162 | B12 |
| 5164 | A13 |
| 5166 | B14 |
| 5167 | B14 |
| 5170 | I1 |
| 5175 | B10 |
| 5180 | D8 |
| 6071 | C2 |
| 6076 | D2 |
| 6091 | F2 |
| 6105 | C9 |
| 6166 | A14 |
| 7074 | C3 |
| 7075 | B4 |
| 7079 | D3 |
| 7080 | D4 |
| 7084 | E3 |
| 7085 | E4 |
| 7088-A | C5 |
| 7088-B | H5 |
| 7088-C | F5 |
| 7089-A | H7 |
| 7089-B | F7 |
| 7089-C | D7 |
| 7090-A | D5 |
| 7090-B | I5 |
| 7090-C | G5 |
| 7100-A | G8 |
| 7100-B | E8 |
| 7100-C | F8 |
| 7102 | E7 |
| 7103 | G7 |
| 7104 | I8 |
| 7105 | I8 |
| 7107 | H9 |
| 7110 | C7 |
| 7111 | C8 |
| 7112 | C8 |
| 7113 | F2 |
| 7115 | D10 |
| 7117 | H2 |
| 7121 | I2 |
| 7129 | D13 |
| 7130 | F13 |
| 7131 | G13 |
| 7135 | A7 |
| 7138 | A9 |
| 7141 | B11 |
| 7145 | D11 |
| 7146-A | C13 |
| 7146-B | E13 |
| 7148 | E10 |
| 7151 | F11 |
| 7154 | G10 |
| 7157 | H11 |
| 7158-A | G13 |
| 7158-B | I13 |
| 7160 | H11 |
| 7165 | A14 |
| F070 | A2 |
| F071 | A3 |
| F072 | A5 |
| F073 | A2 |
| F074 | A3 |
| F075 | A5 |
| F076 | A3 |
| F089 | C7 |
| F146 | E14 |
| F152 | F14 |
| F158 | H14 |
| I050 | C4 |
| I051 | C2 |
| I052 | C3 |
| I053 | C4 |
| I054 | C6 |
| I055 | C5 |
| I056 | D5 |
| I057 | D3 |
| I058 | D6 |
| I059 | D2 |
| I060 | D3 |
| I061 | D5 |
| I062 | D3 |
| I063 | E5 |
| I064 | F5 |
| I065 | F6 |
| I066 | E3 |
| I067 | E2 |
| I068 | E3 |
| I069 | E3 |
| I070 | F5 |
| I071 | G5 |
| I072 | G6 |
| I073 | F2 |
| I074 | F2 |
| I075 | G5 |
| I076 | G3 |
| I077 | H5 |
| I078 | H6 |
| I079 | I5 |
| I080 | I5 |
| I081 | H2 |
| I082 | H2 |
| I083 | I6 |
| I084 | H3 |
| I085 | I5 |
| I086 | I2 |
| I087 | I2 |
| I088 | I3 |
| I090 | I7 |
| I099 | A13 |
| I100 | A13 |
| I101 | A14 |
| I102 | A6 |
| I103 | A7 |
| I104 | A7 |
| I105 | A8 |
| I106 | A9 |
| I107 | A10 |
| I108 | A12 |
| I109 | B10 |
| I110 | B11 |
| I111 | B11 |
| I112 | B14 |
| I113 | I10 |
| I114 | D10 |
| I115 | D11 |
| I116 | D11 |
| I117 | E10 |
| I118 | E10 |
| I119 | E11 |
| I120 | F10 |
| I121 | F11 |
| I122 | F11 |
| I123 | G10 |
| I124 | G10 |
| I125 | G11 |
| I126 | H10 |
| I127 | H11 |
| I128 | H11 |
| I129 | I10 |
| I130 | I11 |
| I131 | I10 |
| I133 | B13 |
| I134 | B13 |
| I135 | I2 |
| I137 | I8 |
| I138 | H8 |
| I139 | H6 |
| I140 | H7 |
| I141 | E6 |
| I142 | E7 |
| I143 | B7 |
| I144 | B10 |
| I145 | C8 |
| I146 | C10 |
| I147 | C9 |
| I148 | H8 |
| I149 | I8 |
| I150 | I8 |

## SCAVIO Panel: Video Selection ADC


SC4
VIDEO-SELECTION -ADC (BASIC AND ENHANCED VERSION)
TO SC10
FROM TO SC11
7170 AD9887KS
AD-CONVERTER
+TMDS RECEIVER
A/D
CLAMP
SYNC PROCESSING AND CLOCK GENERATION
AND POWER MANAGMENT
TMDS RECEIVER
REF
TO SC3
FROM SC2
TO SC10
DDC-EPROM
7215 ST24FC21
7175 LD1117
DVI INPUT SOCKET 0375
BAV99W
+3V3PLL
+3V3MAIN1
+3V3MAIN2
+3V3OUTPUT
+3V3_AD
+5V_POW
+5V_STBY_SW
F 500mA L 32V
F 315mA L 32V
R_ADC
G_ADC
B_ADC
H_ADC
V_ADC
SOGIN
GBLKSPL
GCOAST
PW_SDA
PW_SCL
RX2-
RX2+
SCL
SDA
RX1-
RX1+
RX0-
RX0+
RXC+
RXC-
3122 123 6001.7
CL 36532051_017.eps
140703

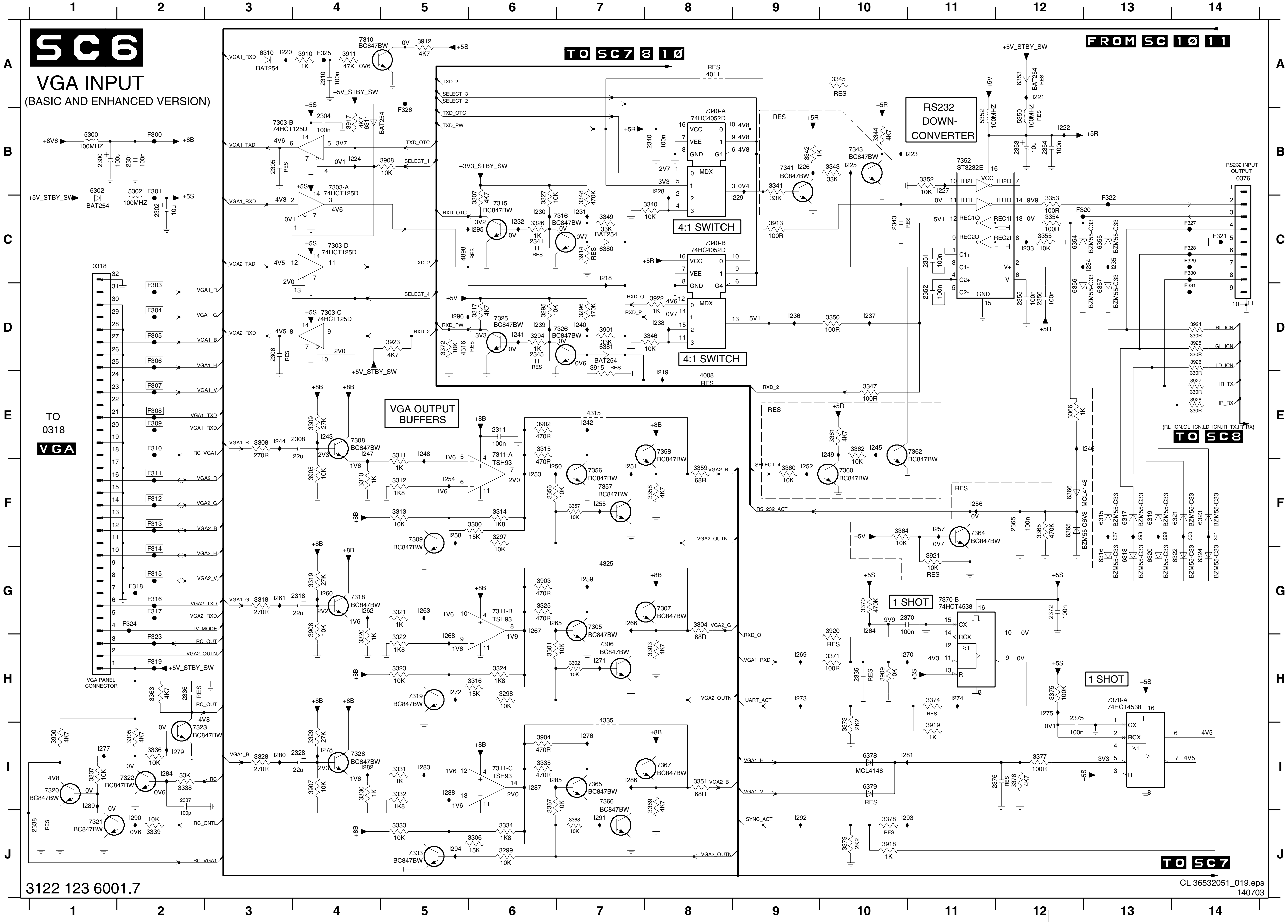
|  |  |
|---|---|
| 0375 | F14 |
| 1170 | G2 |
| 1171 | I1 |
| 2170 | B1 |
| 2171 | B1 |
| 2172 | B1 |
| 2173 | B1 |
| 2174 | C1 |
| 2175 | C1 |
| 2176 | C1 |
| 2177 | C1 |
| 2178 | D1 |
| 2179 | D1 |
| 2180 | D1 |
| 2181 | D1 |
| 2182 | D1 |
| 2183 | D1 |
| 2184 | E1 |
| 2185 | E1 |
| 2186 | E1 |
| 2187 | E1 |
| 2188 | F1 |
| 2189 | F1 |
| 2190 | F1 |
| 2191 | F1 |
| 2192 | F1 |
| 2193 | F1 |
| 2195 | I2 |
| 2196 | G2 |
| 2197 | I2 |
| 2198 | H2 |
| 2199 | H2 |
| 2205 | G4 |
| 2206 | G5 |
| 2207 | G6 |
| 2208 | H7 |
| 2209 | H7 |
| 2210 | H7 |
| 2211 | H7 |
| 2212 | G11 |
| 2217 | H11 |
| 3200 | A10 |
| 3203 | A9 |
| 3204 | A9 |
| 3205 | A10 |
| 3206 | G7 |
| 3207 | G7 |
| 3208 | H7 |
| 3209 | H8 |
| 3210 | H8 |
| 3211 | G10 |
| 3212 | G10 |
| 3213 | I9 |
| 3214 | I9 |
| 3215 | I9 |
| 3216 | I9 |
| 3217 | I11 |
| 3218 | I11 |
| 3219 | A11 |
| 4200 | A12 |
| 4201 | A10 |
| 4202 | A12 |
| 4203 | A11 |
| 4215 | I11 |
| 4216 | I11 |
| 5196 | G2 |
| 5197 | I1 |
| 5198 | H2 |
| 5199 | H2 |
| 5210 | H13 |
| 5214 | H10 |
| 6200 | C12 |
| 6201 | D12 |
| 6202 | D12 |
| 6203 | E12 |
| 6204 | C13 |
| 6205 | D13 |
| 6206 | D13 |
| 6207 | E13 |
| 6208 | H13 |
| 6209 | I13 |
| 6210 | H13 |
| 6214 | H10 |
| 7170 | B2 |
| 7175 | I2 |
| 7215 | I10 |
| F162 | I2 |
| F170 | F12 |
| F171 | F12 |
| F172 | G12 |
| F173 | G12 |
| F174 | G12 |
| F175 | G12 |
| F176 | H12 |
| F177 | H12 |
| F178 | I14 |
| F180 | I12 |
| F181 | I12 |
| F196 | G2 |
| F197 | I1 |
| F198 | H2 |
| F199 | H2 |
| F201 | B10 |
| F202 | G3 |
| F203 | G3 |
| F210 | H6 |
| F211 | H7 |
| F216 | I10 |
| I151 | G11 |
| I152 | G8 |
| I153 | G7 |
| I154 | G10 |
| I155 | G5 |
| I156 | G6 |
| I157 | G6 |
| I158 | H7 |
| I159 | H8 |
| I160 | H10 |
| I161 | H11 |
| I165 | H13 |
| I166 | H14 |

## SCAVIO Panel: Video Selection Decoder


SC5
VIDEO-SELECTION-DECODER (ENHANCED VERSION ONLY)
TO 3D COMB FILTER
VIDEO-DECODER
DE-INTERLACER
TO SC10
7225 SAA7118E
7280 SDA9400
AD-PORT
IIC REGISTER MAP
1ST TASK IIC REG MAP SCALER
2ST TASK IIC REG MAP SCALER
SCALER EVENT CONTROLLER
FAST SWITCH DELAY
COMP PROC
CHROM PROC
COMB FIL
LUM PROC
SYNC
ANALOG INPUT CONTROL
DECODER OUTPUT CONTROL
FIR-PREFILTER PRESCALER BCS-SCALER
LINE FIFO BUFFER
VERTICAL SCALING HORIZONTAL FINE-(PHASE-) SCALING
VIDEO FIFO
OUTPUT FORMATTER I-PORT
TEXT FIFO
VBI DATA SLICER
VIDEO/TEXT ARBITER
AUDIO CLK
X-PORT
H-PORT
BOUNDARY SCAN
ISC INP SYNC CONTROLLER
MC MEM CTRL
OSC OUTP SYNC CONTR.
IFC INPUT FORMAT CONVERSION
NOISE REDUCTION MOTION DETECTOR AND MEASUREMENT
LDR VERTICEL HORIZONTAL DECIMATION
MOVIE MODE AND PHASE DETECTION
ED eDRAM
DATA BUFFER INTERFACES
TEST CTRL VOLTAGE CONTROL
HDR SCAN RATE CONVERSION
VERTICAL INTERPOLATION
OFC OUTPUT FORMAT CONVERSION
LM LINE MEM
PLL1 CLOCK DOUBLING
PLL2 CLOCK DOUBLING
I2C-BUS INTERFACE
0381 YC Input
SVHS
1270 F 500mAL 32V 441
+3V3 +3V3VID
+3V3VID 5221 100MHZ 3V3DA
+3V3VID 5223 100MHZ 3V3DC
+3V3VID 5228 100MHZ 3V3DE
+3V3_AD 5220 100MHZ 3V3AA
+3V3_AD 5222 100MHZ 3V3DB
+3V3_AD 5224 100MHZ 3V3DD
FROM SC3
FROM SC9
CVBS Y_SYNC YS CB CR
VIDCLK
VFIELD_DEC
PW_SCL PW_SDA
VOUT_DEINT HOUT_DEINT VPEN
Y_OUT(0:7)
UV_OUT(0:7)
CLKOUT_DEINT
3122 123 6001.7
CL 36532051_018.eps 140703

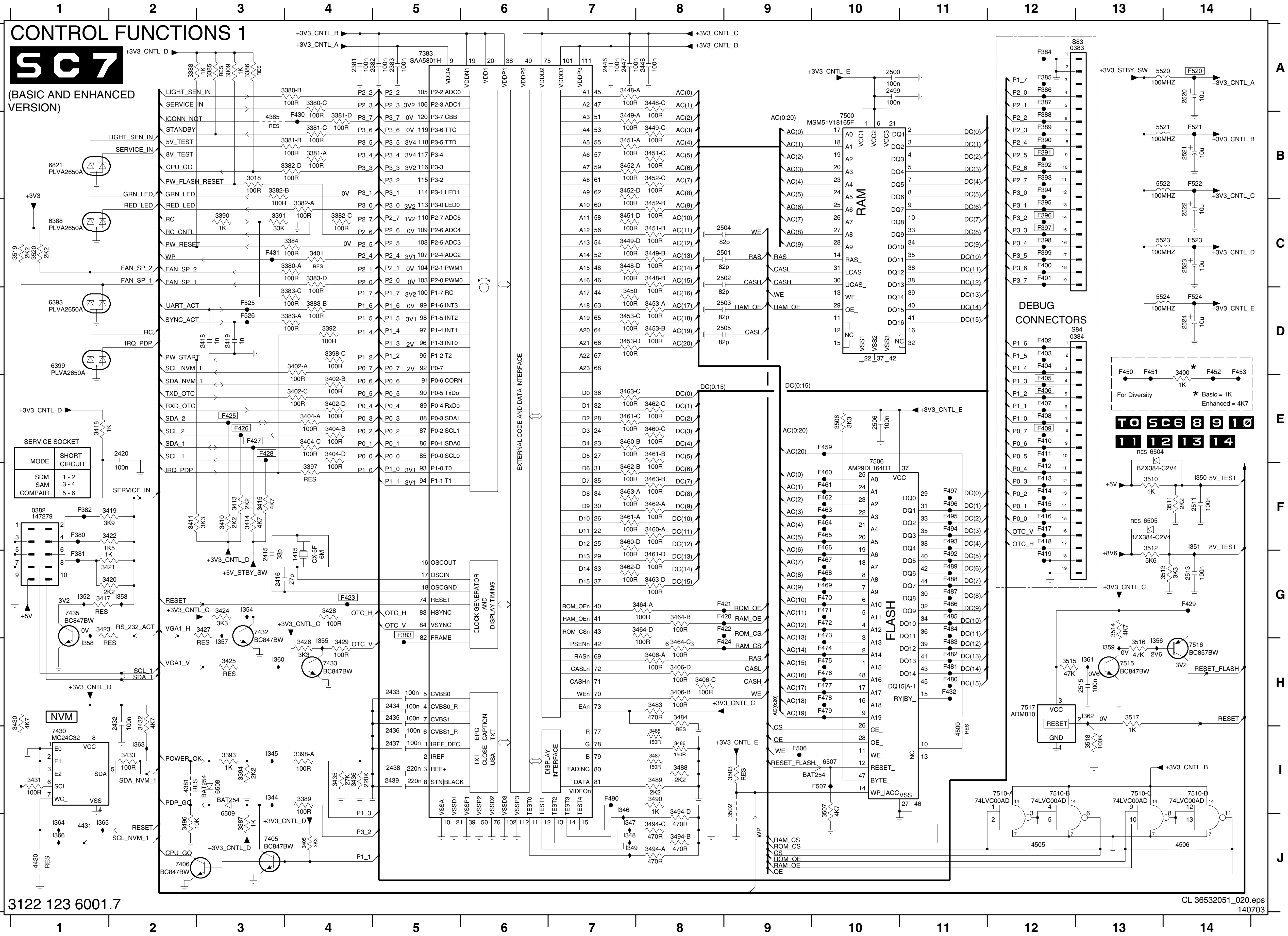
| | |
|---|---|
| 0381 | H3 |
| 0387 | B1 |
| 1250 | F4 |
| 1270 | G5 |
| 2220 | I6 |
| 2221 | H6 |
| 2222 | I6 |
| 2223 | H6 |
| 2224 | I6 |
| 2225 | C2 |
| 2226 | C2 |
| 2228 | H5 |
| 2230 | A5 |
| 2231 | A5 |
| 2232 | A6 |
| 2240 | A6 |
| 2247 | A6 |
| 2248 | A7 |
| 2249 | A7 |
| 2250 | A7 |
| 2252 | F4 |
| 2253 | F4 |
| 2254 | F5 |
| 2260 | F2 |
| 2261 | F3 |
| 2262 | F2 |
| 2263 | F3 |
| 2264 | F2 |
| 2265 | F3 |
| 2266 | G2 |
| 2267 | G3 |
| 2268 | G2 |
| 2269 | G3 |
| 2270 | G2 |
| 2274 | G1 |
| 2275 | G1 |
| 2276 | G1 |
| 2277 | H3 |
| 2278 | H4 |
| 2279 | H4 |
| 2280 | B11 |
| 2281 | B11 |
| 2282 | B11 |
| 2283 | B11 |
| 2284 | B12 |
| 2285 | B12 |
| 2286 | B12 |
| 2287 | B12 |
| 2288 | B12 |
| 3220 | B1 |
| 3225 | C3 |
| 3250 | B8 |
| 3251 | B8 |
| 3260 | F3 |
| 3261 | F6 |
| 3262 | E8 |
| 3263 | E8 |
| 3271 | G3 |
| 3274 | H1 |
| 3275 | H2 |
| 3276 | H2 |
| 3277 | H3 |
| 3278 | H4 |
| 3279 | H4 |
| 3284 | F9 |
| 3285 | F10 |
| 3286-A | D13 |
| 3286-B | C13 |
| 3286-C | C13 |
| 3289-A | D13 |
| 3289-B | D13 |
| 3289-C | D13 |
| 3289-D | D13 |
| 3290-A | D13 |
| 3290-B | E13 |
| 3290-C | E13 |
| 3290-D | E13 |
| 3291-A | E13 |
| 3291-B | E13 |
| 3291-C | E13 |
| 3291-D | F13 |
| 3292-A | F13 |
| 3292-B | F13 |
| 3292-C | F13 |
| 3292-D | F13 |
| 3293 | F13 |
| 4220 | C1 |
| 4250 | G4 |
| 5220 | I5 |
| 5221 | H5 |
| 5222 | I5 |
| 5223 | H5 |
| 5224 | I5 |
| 5226 | F5 |
| 5228 | H5 |
| 6274 | I1 |
| 6276 | I2 |
| 6277 | I2 |
| 6278 | I2 |
| 7225 | C3 |
| 7280 | C10 |
| F220 | I6 |
| F221 | H6 |
| F222 | I6 |
| F223 | H6 |
| F224 | I6 |
| F225 | B1 |
| F226 | B1 |
| F227 | B1 |
| F228 | B1 |
| F229 | C1 |
| F230 | C1 |
| F231 | C1 |
| F232 | C1 |
| F233 | C1 |
| F234 | H3 |
| F235 | I2 |
| F236 | I2 |
| F237 | H6 |
| F240 | C9 |
| F241 | C9 |
| F242 | D9 |
| F245 | C14 |
| F246 | C14 |
| F247 | D14 |
| F249 | F13 |
| F250 | B7 |
| F251 | B7 |
| F260 | E2 |
| F261 | E6 |
| F262 | E6 |
| F263 | E6 |
| F264 | E6 |
| F265 | F6 |
| I200 | I2 |
| I201 | H4 |
| I202 | H4 |
| I203 | F5 |
| I204 | H7 |
| I205 | F3 |
| I206 | E8 |
| I207 | F5 |

## SCAVIO Panel: VGA Input


SC6
VGA INPUT
(BASIC AND ENHANCED VERSION)
TO SC7 8 10
FROM SC 10 11
TO SC8
TO SC7
TO 0318
VGA
VGA PANEL CONNECTOR
0318
0376
RS232 INPUT OUTPUT
RS232 DOWN-CONVERTER
7352 ST3232E
4:1 SWITCH
7340-A 74HC4052D
7340-B 74HC4052D
7303-A 74HCT125D
7303-B 74HCT125D
7303-C 74HCT125D
7303-D 74HCT125D
VGA OUTPUT BUFFERS
7311-A TSH93
7311-B TSH93
7311-C TSH93
1 SHOT
7370-A 74HCT4538
7370-B 74HCT4538
+5V_STBY_SW
+3V3_STBY_SW
+8V6
+8B
+5S
+5R
+5V
VGA1_RXD
VGA1_TXD
VGA2_TXD
VGA2_RXD
VGA1_R
VGA1_G
VGA1_B
VGA1_H
VGA1_V
VGA2_R
VGA2_G
VGA2_B
VGA2_H
VGA2_V
VGA2_OUTN
RC_VGA1
TV_MODE
RC_OUT
RC
RC_CNTL
TXD_2
SELECT_3
SELECT_2
SELECT_1
SELECT_4
TXD_OTC
TXD_PW
RXD_OTC
RXD_PW
RXD_2
RXD_O
RXD_P
UART_ACT
RS_232_ACT
SYNC_ACT
RL_ICN
GL_ICN
LD_ICN
IR_TX
IR_RX
(RL_ICN,GL_ICN,LD_ICN,IR_TX,IR_RX)
3122 123 6001.7
CL 36532051_019.eps
140703

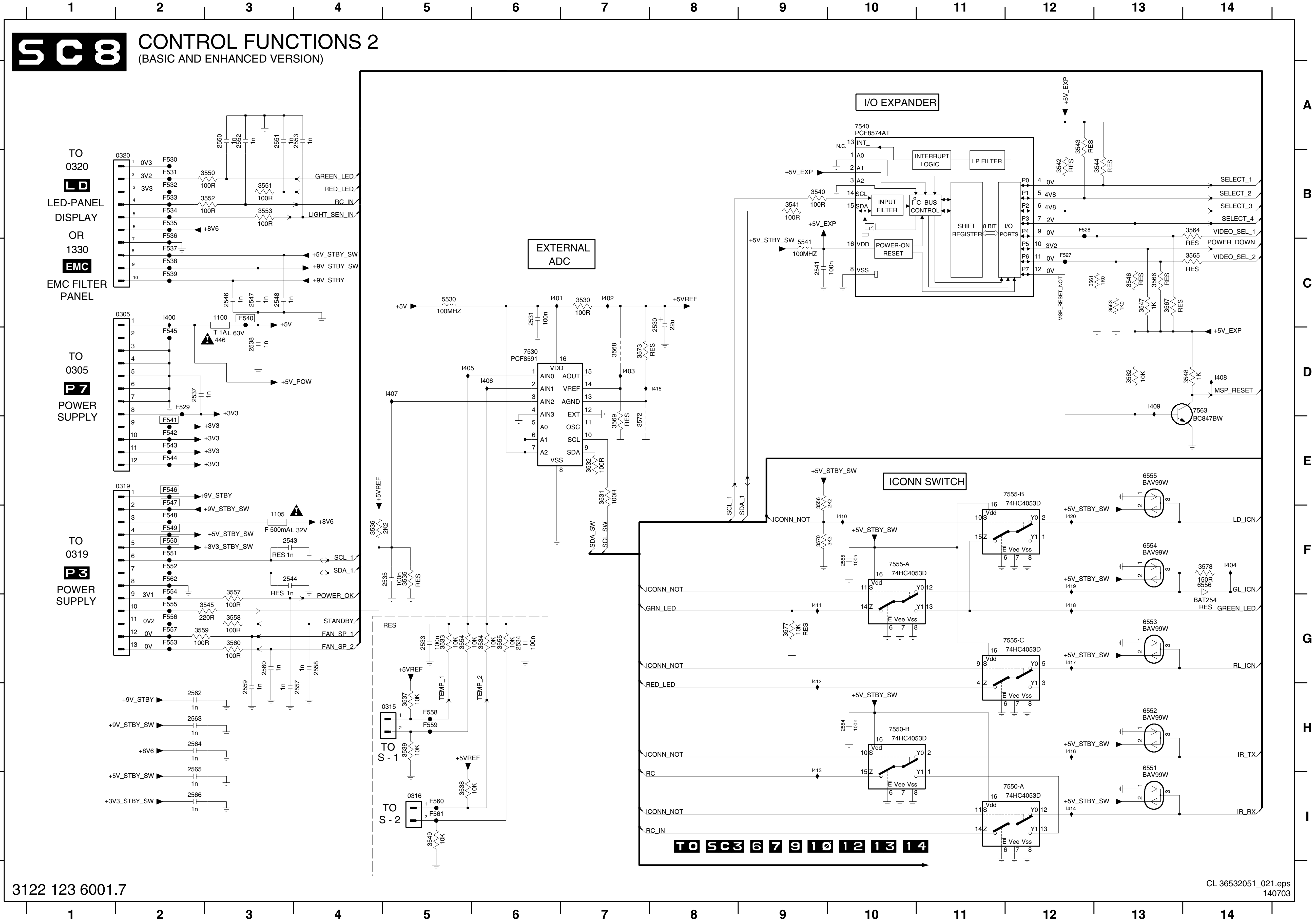
| | |
|---|---|
| 0318 | C1 |
| 0376 | B14 |
| 2300 | B1 |
| 2301 | B2 |
| 2302 | B2 |
| 2304 | B4 |
| 2305 | B3 |
| 2306 | D3 |
| 2308 | E4 |
| 2310 | A4 |
| 2311 | E6 |
| 2318 | G4 |
| 2328 | I4 |
| 2335 | H10 |
| 2336 | H2 |
| 2337 | I2 |
| 2338 | J1 |
| 2340 | B8 |
| 2341 | C6 |
| 2343 | C10 |
| 2345 | D6 |
| 2351 | C11 |
| 2352 | D11 |
| 2353 | B12 |
| 2354 | B12 |
| 2355 | D12 |
| 2356 | D12 |
| 2365 | F12 |
| 2370 | G10 |
| 2372 | G12 |
| 2375 | H12 |
| 2376 | I12 |
| 3294 | D6 |
| 3295 | D6 |
| 3296 | D7 |
| 3297 | F6 |
| 3298 | H6 |
| 3299 | J6 |
| 3300 | F6 |
| 3301 | H6 |
| 3302 | H7 |
| 3303 | H8 |
| 3304 | G8 |
| 3305 | I2 |
| 3306 | J6 |
| 3307 | C6 |
| 3308 | E3 |
| 3309 | E4 |
| 3310 | F4 |
| 3311 | E5 |
| 3312 | F5 |
| 3313 | F5 |
| 3314 | F6 |
| 3315 | E6 |
| 3316 | H6 |
| 3317 | D6 |
| 3318 | G3 |
| 3319 | G4 |
| 3320 | H4 |
| 3321 | G5 |
| 3322 | H5 |
| 3323 | H5 |
| 3324 | H6 |
| 3325 | G6 |
| 3326 | C6 |
| 3327 | C6 |
| 3328 | I3 |
| 3329 | I4 |
| 3330 | I4 |
| 3331 | I5 |
| 3332 | I5 |
| 3333 | J5 |
| 3334 | J6 |
| 3335 | I6 |
| 3336 | I2 |
| 3337 | I1 |
| 3338 | I2 |
| 3339 | J2 |
| 3340 | C8 |
| 3341 | B9 |
| 3342 | B9 |
| 3343 | B10 |
| 3344 | B10 |
| 3345 | A10 |
| 3346 | D8 |
| 3347 | E10 |
| 3348 | C7 |
| 3349 | C7 |
| 3350 | D10 |
| 3351 | I8 |
| 3352 | B11 |
| 3353 | C12 |
| 3354 | C12 |
| 3355 | C12 |
| 3356 | F6 |
| 3357 | F7 |
| 3358 | F8 |
| 3359 | F8 |
| 3360 | F9 |
| 3361 | E10 |
| 3362 | E10 |
| 3363 | H2 |
| 3364 | F10 |
| 3365 | F12 |
| 3366 | E12 |
| 3367 | I6 |
| 3368 | J7 |
| 3369 | I8 |
| 3370 | G10 |
| 3371 | H10 |
| 3372 | D5 |
| 3373 | I10 |
| 3374 | H11 |
| 3375 | H12 |
| 3376 | I12 |
| 3377 | I12 |
| 3378 | J10 |
| 3379 | J10 |
| 3900 | I1 |
| 3901 | D7 |
| 3902 | E6 |
| 3903 | G6 |
| 3904 | I6 |
| 3905 | F4 |
| 3906 | G4 |
| 3907 | I4 |
| 3908 | B5 |
| 3909 | H10 |
| 3910 | A4 |
| 3911 | A4 |
| 3912 | A5 |
| 3913 | C9 |
| 3914 | C7 |
| 3915 | D7 |
| 3917 | B4 |
| 3918 | J10 |
| 3919 | I11 |
| 3920 | G10 |
| 3921 | G11 |
| 3922 | D8 |
| 3923 | D5 |
| 3924 | D14 |
| 3925 | D14 |
| 3926 | D14 |
| 3927 | E14 |
| 3928 | E14 |
| 4008 | E8 |
| 4011 | A8 |
| 4315 | E7 |
| 4316 | D5 |
| 4325 | G7 |
| 4335 | I7 |
| 4898 | C5 |
| 5300 | B1 |
| 5302 | B2 |
| 5350 | B12 |
| 5352 | B11 |
| 6302 | B1 |
| 6310 | A3 |
| 6311 | B4 |
| 6315 | F13 |
| 6316 | G13 |
| 6317 | F13 |
| 6318 | G13 |
| 6319 | F13 |
| 6320 | G13 |
| 6321 | F14 |
| 6322 | G14 |
| 6323 | F14 |
| 6324 | G14 |
| 6353 | A12 |
| 6354 | C12 |
| 6355 | C13 |
| 6356 | D12 |
| 6357 | D13 |
| 6365 | F12 |
| 6366 | F12 |
| 6378 | I10 |
| 6379 | I10 |
| 6380 | C7 |
| 6381 | D7 |
| 7303-A | B4 |
| 7303-B | B4 |
| 7303-C | D4 |
| 7303-D | C4 |
| 7305 | G7 |
| 7306 | H7 |
| 7307 | G8 |
| 7308 | E4 |
| 7309 | F5 |
| 7310 | A4 |
| 7311-A | E6 |
| 7311-B | G6 |
| 7311-C | I6 |
| 7315 | C6 |
| 7316 | C7 |
| 7318 | G4 |
| 7319 | H5 |
| 7320 | I1 |
| 7321 | J1 |
| 7322 | I2 |
| 7323 | I2 |
| 7325 | D6 |
| 7326 | D7 |
| 7328 | I4 |
| 7333 | J5 |
| 7340-A | B8 |
| 7340-B | C8 |
| 7341 | B9 |
| 7343 | B10 |
| 7352 | B11 |
| 7356 | F7 |
| 7357 | F7 |
| 7358 | E8 |
| 7360 | F10 |
| 7362 | E11 |
| 7364 | F11 |
| 7365 | I7 |
| 7366 | I7 |
| 7367 | I8 |
| 7370-A | H13 |
| 7370-B | G11 |
| F300 | B2 |
| F301 | B2 |
| F303 | D2 |
| F304 | D2 |
| F305 | D2 |
| F306 | D2 |
| F307 | E2 |
| F308 | E2 |
| F309 | E2 |
| F310 | E2 |
| F311 | F2 |
| F312 | F2 |
| F313 | F2 |
| F314 | G2 |
| F315 | G2 |
| F316 | G2 |
| F317 | G2 |
| F318 | G2 |
| F319 | H2 |
| F320 | C12 |
| F321 | C14 |
| F322 | C13 |
| F323 | H2 |
| F324 | G2 |
| F325 | A4 |
| F326 | B5 |
| F327 | C14 |
| F328 | C14 |
| F329 | C14 |
| F330 | C14 |
| F331 | D14 |
| I218 | C7 |
| I219 | E8 |
| I220 | A3 |
| I221 | A12 |
| I222 | B12 |
| I223 | B11 |
| I224 | B4 |
| I225 | B10 |
| I226 | B9 |
| I227 | B11 |
| I228 | B8 |
| I229 | C9 |
| I230 | C6 |
| I231 | C7 |
| I232 | C6 |
| I233 | C12 |
| I234 | C13 |
| I235 | C13 |
| I236 | D9 |
| I237 | D10 |
| I238 | D8 |
| I239 | D6 |
| I240 | D7 |
| I241 | D6 |
| I242 | E7 |
| I243 | E4 |
| I244 | E3 |
| I245 | E10 |
| I246 | E13 |
| I247 | E4 |
| I248 | E5 |
| I249 | E10 |
| I250 | F6 |
| I251 | F7 |
| I252 | F9 |
| I253 | F6 |
| I254 | F5 |
| I255 | F7 |
| I256 | F11 |
| I257 | F11 |
| I258 | F5 |
| I259 | G7 |
| I260 | G4 |
| I261 | G3 |
| I262 | G4 |
| I263 | G5 |
| I264 | G10 |
| I265 | G6 |
| I266 | G7 |
| I267 | G6 |
| I268 | H5 |
| I269 | H9 |
| I270 | H10 |
| I271 | H7 |
| I272 | H5 |
| I273 | H9 |
| I274 | H11 |
| I275 | H12 |
| I276 | I7 |
| I277 | I1 |
| I278 | I4 |
| I279 | I2 |
| I280 | I3 |
| I281 | I10 |
| I282 | I4 |
| I283 | I5 |
| I284 | I2 |
| I285 | I6 |
| I286 | I7 |
| I287 | I6 |
| I288 | I5 |
| I289 | I1 |
| I290 | J2 |
| I291 | J7 |
| I292 | J9 |
| I293 | J10 |
| I294 | J5 |
| I295 | C6 |
| I296 | D5 |
| I297 | F13 |
| I298 | F13 |
| I299 | F13 |
| I300 | F14 |
| I301 | F14 |

## SCAVIO Panel: Control Functions 1


CONTROL FUNCTIONS 1
SC7
(BASIC AND ENHANCED VERSION)
7383 SAA5801H
EXTERNAL CODE AND DATA INTERFACE
CLOCK GENERATOR AND DISPLAY TIMING
TXT CLOSE CAPTION USA
EPG CAPTION TXT
DISPLAY INTERFACE
7500 MSM51V18165F
RAM
7506 AM29DL164DT
FLASH
DEBUG CONNECTORS
7430 MC24C32
NVM
7517 ADM810
7510-A 74LVC00AD
7510-B 74LVC00AD
7510-C 74LVC00AD
7510-D 74LVC00AD
SERVICE SOCKET
MODE
SHORT CIRCUIT
SDM 1 - 2
SAM 3 - 4
COMPAIR 5 - 6
For Diversity
* Basic = 1K
Enhanced = 4K7
3122 123 6001.7
CL 36532051_020.eps
140703
1 2 3 4 5 6 7 8 9 10 11 12 13 14
A B C D E F G H I J

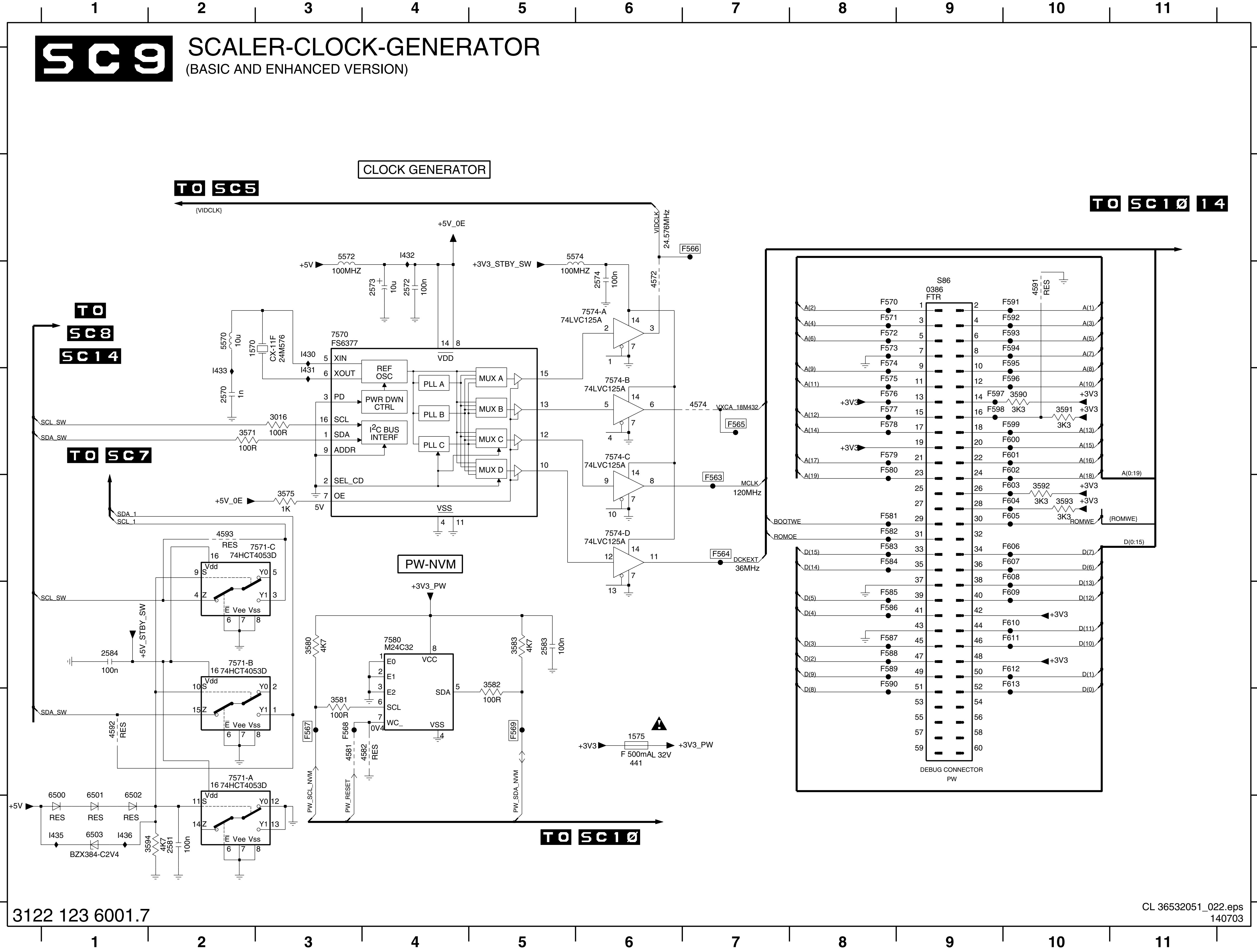
| | |
|---|---|
| 0382 | F1 |
| 0383 | A12 |
| 0384 | D12 |
| 1415 | G4 |
| 2381 | A4 |
| 2382 | A5 |
| 2383 | A5 |
| 2415 | G3 |
| 2416 | G3 |
| 2418 | D3 |
| 2419 | D3 |
| 2420 | E2 |
| 2432 | H2 |
| 2433 | H5 |
| 2434 | H5 |
| 2435 | H5 |
| 2436 | I5 |
| 2437 | I5 |
| 2438 | I5 |
| 2439 | I5 |
| 2446 | A7 |
| 2447 | A7 |
| 2448 | A8 |
| 2499 | A10 |
| 2500 | A10 |
| 2501 | C8 |
| 2502 | C8 |
| 2503 | D8 |
| 2504 | C8 |
| 2505 | D8 |
| 2506 | E10 |
| 2511 | F14 |
| 2513 | G14 |
| 2515 | H13 |
| 2520 | A14 |
| 2521 | B14 |
| 2522 | C14 |
| 2523 | C14 |
| 2524 | D14 |
| 3009 | A3 |
| 3018 | B3 |
| 3380-A | C4 |
| 3380-B | A4 |
| 3380-C | A4 |
| 3381-A | B4 |
| 3381-B | B4 |
| 3381-C | B4 |
| 3381-D | B4 |
| 3382-A | C4 |
| 3382-B | B3 |
| 3382-C | C4 |
| 3382-D | B4 |
| 3383-A | D4 |
| 3383-B | D4 |
| 3383-C | D4 |
| 3383-D | C4 |
| 3384 | C4 |
| 3385 | A3 |
| 3386 | A3 |
| 3387 | J3 |
| 3388 | A2 |
| 3389 | I4 |
| 3390 | C3 |
| 3391 | C3 |
| 3392 | D4 |
| 3393 | I3 |
| 3394 | I3 |
| 3397 | F4 |
| 3398-A | I4 |
| 3398-C | D4 |
| 3400 | D14 |
| 3401 | C4 |
| 3402-A | D4 |
| 3402-B | E4 |
| 3402-C | E4 |
| 3402-D | E4 |
| 3404-A | E4 |
| 3404-B | E4 |
| 3404-C | E4 |
| 3404-D | E4 |
| 3405 | J4 |
| 3406-A | H8 |
| 3406-B | H8 |
| 3406-C | H8 |
| 3406-D | H8 |
| 3410 | F3 |
| 3411 | F2 |
| 3413 | F3 |
| 3414 | F3 |
| 3415 | F3 |
| 3417 | G1 |
| 3418 | E1 |
| 3419 | F2 |
| 3420 | G2 |
| 3421 | G1 |
| 3422 | F2 |
| 3423 | G1 |
| 3424 | G3 |
| 3425 | H3 |
| 3426 | H4 |
| 3427 | G3 |
| 3428 | G4 |
| 3429 | H4 |
| 3430 | H1 |
| 3431 | I1 |
| 3432 | H2 |
| 3433 | I2 |
| 3435 | I4 |
| 3436 | I4 |
| 3448-A | A7 |
| 3448-B | C8 |
| 3448-C | A8 |
| 3448-D | C7 |
| 3449-A | B7 |
| 3449-B | C8 |
| 3449-C | B8 |
| 3449-D | C7 |
| 3450 | D7 |
| 3451-A | B7 |
| 3451-B | C8 |
| 3451-C | B8 |
| 3451-D | C7 |
| 3452-A | B7 |
| 3452-B | C8 |
| 3452-C | B8 |
| 3452-D | B7 |
| 3453-A | D8 |
| 3453-B | D8 |
| 3453-C | D7 |
| 3453-D | D7 |
| 3460-A | F8 |
| 3460-B | E7 |
| 3460-C | E8 |
| 3460-D | F7 |
| 3461-A | F7 |
| 3461-B | E8 |
| 3461-C | E7 |
| 3461-D | G8 |
| 3462-A | F8 |
| 3462-B | F7 |
| 3462-C | E8 |
| 3462-D | G7 |
| 3463-A | F7 |
| 3463-B | F8 |
| 3463-C | E7 |
| 3463-D | G8 |
| 3464-A | G8 |
| 3464-B | G8 |
| 3464-C | H8 |
| 3464-D | G8 |
| 3483 | H8 |
| 3484 | H8 |
| 3485 | I8 |
| 3486 | I8 |
| 3487 | I8 |
| 3488 | I8 |
| 3489 | I8 |
| 3490 | I8 |
| 3494-A | J8 |
| 3494-B | J8 |
| 3494-C | J8 |
| 3494-D | I8 |
| 3496 | J2 |
| 3502 | I9 |
| 3503 | I9 |
| 3506 | E10 |
| 3507 | I10 |
| 3510 | F13 |
| 3511 | F14 |
| 3512 | F13 |
| 3513 | G14 |
| 3514 | G13 |
| 3515 | H12 |
| 3516 | H13 |
| 3517 | H13 |
| 3518 | I13 |
| 3519 | C1 |
| 3520 | C1 |
| 4381 | I2 |
| 4385 | B3 |
| 4430 | J1 |
| 4431 | J1 |
| 4500 | I11 |
| 4505 | J12 |
| 4506 | J14 |
| 5520 | A13 |
| 5521 | B13 |
| 5522 | B13 |
| 5523 | C13 |
| 5524 | D13 |
| 6388 | C1 |
| 6393 | D1 |
| 6399 | D1 |
| 6504 | E13 |
| 6505 | F13 |
| 6507 | I10 |
| 6508 | I3 |
| 6509 | J3 |
| 6821 | B1 |
| 7383 | A5 |
| 7405 | J3 |
| 7406 | J2 |
| 7430 | I1 |
| 7432 | G3 |
| 7433 | H4 |
| 7435 | G1 |
| 7500 | B10 |
| 7506 | F10 |
| 7510-A | I12 |
| 7510-B | I12 |
| 7510-C | I13 |
| 7510-D | I14 |
| 7515 | H13 |
| 7516 | H14 |
| 7517 | H12 |
| F380 | F1 |
| F381 | G1 |
| F382 | F1 |
| F383 | G5 |
| F384 | A12 |
| F385 | A12 |
| F386 | A12 |
| F387 | A12 |
| F388 | B12 |
| F389 | B12 |
| F390 | B12 |
| F391 | B12 |
| F392 | B12 |
| F393 | B12 |
| F394 | B12 |
| F395 | C12 |
| F396 | C12 |
| F397 | C12 |
| F398 | C12 |
| F399 | C12 |
| F400 | C12 |
| F401 | C12 |
| F402 | D12 |
| F403 | D12 |
| F404 | D12 |
| F405 | E12 |
| F406 | E12 |
| F407 | E12 |
| F408 | E12 |
| F409 | E12 |
| F410 | E12 |
| F411 | E12 |
| F412 | F12 |
| F413 | F12 |
| F414 | F12 |
| F415 | F12 |
| F416 | F12 |
| F417 | F12 |
| F418 | F12 |
| F419 | G12 |
| F420 | G9 |
| F421 | G9 |
| F422 | G9 |
| F423 | G4 |
| F424 | H9 |
| F425 | E3 |
| F426 | E3 |
| F427 | E3 |
| F428 | E3 |
| F429 | G14 |
| F430 | B4 |
| F431 | C3 |
| F432 | H11 |
| F450 | D13 |
| F451 | D13 |
| F452 | D14 |
| F453 | D14 |
| F459 | E10 |
| F460 | F10 |
| F461 | F10 |
| F462 | F10 |
| F463 | F10 |
| F464 | F10 |
| F465 | F10 |
| F466 | F10 |
| F467 | G10 |
| F468 | G10 |
| F469 | G10 |
| F470 | G10 |
| F471 | G10 |
| F472 | G10 |
| F473 | G10 |
| F474 | H10 |
| F475 | H10 |
| F476 | H10 |
| F477 | H10 |
| F478 | H10 |
| F479 | H10 |
| F480 | H11 |
| F481 | H11 |
| F482 | H11 |
| F483 | H11 |
| F484 | G11 |
| F485 | G11 |
| F486 | G11 |
| F487 | G11 |
| F488 | G11 |
| F489 | G11 |
| F490 | I7 |
| F492 | G11 |
| F493 | F11 |
| F494 | F11 |
| F495 | F11 |
| F496 | F11 |
| F497 | F11 |
| F506 | I9 |
| F507 | I10 |
| F520 | A14 |
| F521 | B14 |
| F522 | B14 |
| F523 | C14 |
| F524 | D14 |
| F525 | D3 |
| F526 | D3 |
| I344 | I3 |
| I345 | I3 |
| I346 | I7 |
| I347 | J7 |
| I348 | J7 |
| I349 | J7 |
| I350 | F14 |
| I351 | F14 |
| I352 | G1 |
| I353 | G2 |
| I354 | G3 |
| I355 | H4 |
| I356 | H13 |
| I357 | H3 |
| I358 | H1 |
| I359 | H13 |
| I360 | H3 |
| I361 | H13 |
| I362 | H13 |
| I363 | I2 |
| I364 | J1 |
| I365 | J1 |
| I366 | J1 |

## SCAVIO Panel: Control Functions 2


SC8
CONTROL FUNCTIONS 2
(BASIC AND ENHANCED VERSION)
TO 0320 LD LED-PANEL DISPLAY OR 1330 EMC EMC FILTER PANEL
TO 0305 P7 POWER SUPPLY
TO 0319 P3 POWER SUPPLY
EXTERNAL ADC
7530 PCF8591
I/O EXPANDER
7540 PCF8574AT
INTERRUPT LOGIC
LP FILTER
INPUT FILTER
I2C BUS CONTROL
SHIFT REGISTER
8 BIT
I/O PORTS
POWER-ON RESET
ICONN SWITCH
7555-A 74HC4053D
7555-B 74HC4053D
7555-C 74HC4053D
7550-A 74HC4053D
7550-B 74HC4053D
6551 BAV99W
6552 BAV99W
6553 BAV99W
6554 BAV99W
6555 BAV99W
7563 BC847BW
GREEN_LED
RED_LED
RC_IN
LIGHT_SEN_IN
+5V_STBY_SW
+9V_STBY_SW
+9V_STBY
+5V
+5V_POW
+3V3
+8V6
SCL_1
SDA_1
POWER_OK
STANDBY
FAN_SP_1
FAN_SP_2
+5VREF
+5V_EXP
SELECT_1
SELECT_2
SELECT_3
SELECT_4
VIDEO_SEL_1
POWER_DOWN
VIDEO_SEL_2
MSP_RESET
ICONN_NOT
LD_ICN
GL_ICN
GREEN_LED
RL_ICN
IR_TX
IR_RX
RC
RC_IN
TEMP_1
TEMP_2
TO S - 1
TO S - 2
TO SC3 6 7 9 10 12 13 14
3122 123 6001.7
CL 36532051_021.eps
140703

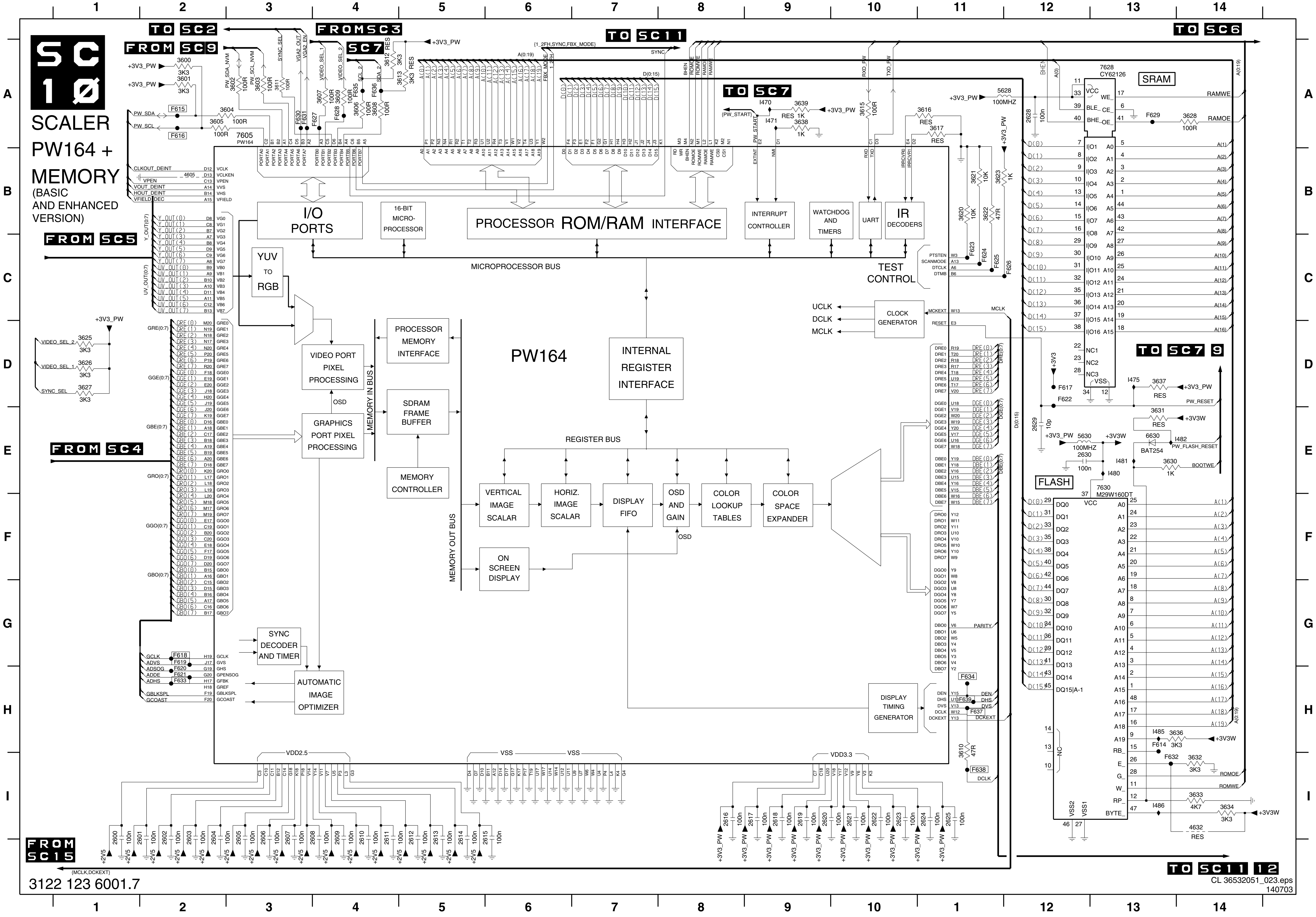
| | |
|---|---|
| 0305 | C2 |
| 0315 | H5 |
| 0316 | I5 |
| 0319 | E2 |
| 0320 | B2 |
| 1100 | C3 |
| 1105 | F3 |
| 2530 | C8 |
| 2531 | C6 |
| 2533 | G5 |
| 2534 | G6 |
| 2535 | F5 |
| 2537 | D2 |
| 2538 | D3 |
| 2541 | C9 |
| 2543 | F3 |
| 2544 | F3 |
| 2546 | C3 |
| 2547 | C3 |
| 2548 | C3 |
| 2550 | A3 |
| 2551 | A3 |
| 2552 | A3 |
| 2553 | A4 |
| 2554 | H10 |
| 2555 | F10 |
| 2557 | H4 |
| 2558 | G4 |
| 2559 | H3 |
| 2560 | G3 |
| 2562 | H2 |
| 2563 | H2 |
| 2564 | H2 |
| 2565 | H2 |
| 2566 | I2 |
| 3530 | C7 |
| 3531 | E7 |
| 3532 | E7 |
| 3533 | G5 |
| 3534 | G6 |
| 3535 | F5 |
| 3536 | F4 |
| 3537 | H5 |
| 3538 | I5 |
| 3539 | H5 |
| 3540 | B9 |
| 3541 | B9 |
| 3542 | B12 |
| 3543 | A12 |
| 3544 | B13 |
| 3545 | G3 |
| 3546 | C13 |
| 3547 | C13 |
| 3548 | D14 |
| 3549 | I5 |
| 3550 | B3 |
| 3551 | B3 |
| 3552 | B3 |
| 3553 | B3 |
| 3554 | G5 |
| 3555 | G6 |
| 3556 | E9 |
| 3557 | G3 |
| 3558 | G3 |
| 3559 | G2 |
| 3560 | G3 |
| 3561 | C12 |
| 3562 | D13 |
| 3563 | C13 |
| 3564 | B14 |
| 3565 | C14 |
| 3566 | C13 |
| 3567 | C13 |
| 3568 | D7 |
| 3569 | E7 |
| 3570 | F9 |
| 3572 | E7 |
| 3573 | D7 |
| 3577 | G9 |
| 3578 | F14 |
| 5530 | C5 |
| 5541 | C9 |
| 6551 | H13 |
| 6552 | H13 |
| 6553 | G13 |
| 6554 | F13 |
| 6555 | E13 |
| 6556 | F14 |
| 7530 | D6 |
| 7540 | A10 |
| 7550-A | I12 |
| 7550-B | H10 |
| 7555-A | F10 |
| 7555-B | E12 |
| 7555-C | G12 |
| 7563 | D14 |
| F527 | C12 |
| F528 | B12 |
| F529 | D2 |
| F530 | B2 |
| F531 | B2 |
| F532 | B2 |
| F533 | B2 |
| F534 | B2 |
| F535 | B2 |
| F536 | B2 |
| F537 | C2 |
| F538 | C2 |
| F539 | C2 |
| F540 | C3 |
| F541 | E2 |
| F542 | E2 |
| F543 | E2 |
| F544 | E2 |
| F545 | D2 |
| F546 | E2 |
| F547 | E2 |
| F548 | F2 |
| F549 | F2 |
| F550 | F2 |
| F551 | F2 |
| F552 | F2 |
| F553 | G2 |
| F554 | F2 |
| F555 | G2 |
| F556 | G2 |
| F557 | G2 |
| F558 | H5 |
| F559 | H5 |
| F560 | I5 |
| F561 | I5 |
| F562 | F2 |
| I400 | C2 |
| I401 | C6 |
| I402 | C7 |
| I403 | D7 |
| I404 | F14 |
| I405 | D5 |
| I406 | D6 |
| I407 | D5 |
| I408 | D14 |
| I409 | D13 |
| I410 | F10 |
| I411 | G9 |
| I412 | G9 |
| I413 | H9 |
| I414 | I12 |
| I415 | D8 |
| I416 | H12 |
| I417 | G12 |
| I418 | G12 |
| I419 | F12 |
| I420 | F12 |

## SCAVIO Panel: Scaler Clock Generator


SC9
SCALER-CLOCK-GENERATOR
(BASIC AND ENHANCED VERSION)
CLOCK GENERATOR
TO SC5
{VIDCLK}
TO SC10 14
TO SC8 SC14
TO SC7
TO SC10
PW-NVM
+5V_0E
+5V
5572 100MHZ
I432
2573 10u
2572 100n
+3V3_STBY_SW
5574 100MHZ
2574 100n
4572
VIDCLK 24.576MHz
F566
5570 10u
1570 CX-11F 24M576
I430
I431
I433
2570 1n
7570 FS6377
XIN
XOUT
PD
SCL
SDA
ADDR
SEL_CD
OE
VDD
VSS
REF OSC
PWR DWN CTRL
I2C BUS INTERF
PLL A
PLL B
PLL C
MUX A
MUX B
MUX C
MUX D
3016 100R
3571 100R
3575 1K
5V
SCL_SW
SDA_SW
SDA_1
SCL_1
7574-A 74LVC125A
7574-B 74LVC125A
7574-C 74LVC125A
7574-D 74LVC125A
4574
VXCA_18M432
F565
F563
MCLK 120MHz
F564
DCKEXT 36MHz
4593 RES
7571-C 74HCT4053D
7571-B 74HCT4053D
7571-A 74HCT4053D
Vdd
Y0
Y1
E Vee Vss
2584 100n
+5V_STBY_SW
4592 RES
6500 RES
6501 RES
6502 RES
I435
6503 BZX384-C2V4
I436
3594 4K7
2581 100n
+3V3_PW
3580 4K7
7580 M24C32
E0
E1
E2
SCL
WC_
VCC
SDA
VSS
3581 100R
3582 100R
3583 4K7
2583 100n
F567
F568
0V4
4581
4582 RES
F569
PW_SCL_NVM
PW_RESET
PW_SDA_NVM
+3V3
1575 F 500mAL 32V 441
+3V3_PW
S86
0386 FTR
F570 F571 F572 F573 F574 F575 F576 F577 F578 F579 F580
F581 F582 F583 F584 F585 F586 F587 F588 F589 F590
F591 F592 F593 F594 F595 F596 F597 F598 F599 F600 F601 F602
F603 F604 F605 F606 F607 F608 F609 F610 F611 F612 F613
4591 RES
3590 3K3
3591 3K3
3592 3K3
3593 3K3
A(1) A(2) A(3) A(4) A(5) A(6) A(7) A(8) A(9) A(10) A(11) A(12) A(13) A(14) A(15) A(16) A(17) A(18) A(19)
A(0:19)
BOOTWE
ROMOE
ROMWE
{ROMWE}
D(0) D(1) D(2) D(3) D(4) D(5) D(6) D(7) D(8) D(9) D(10) D(11) D(12) D(13) D(14) D(15)
D(0:15)
DEBUG CONNECTOR PW
3122 123 6001.7
CL 36532051_022.eps
140703

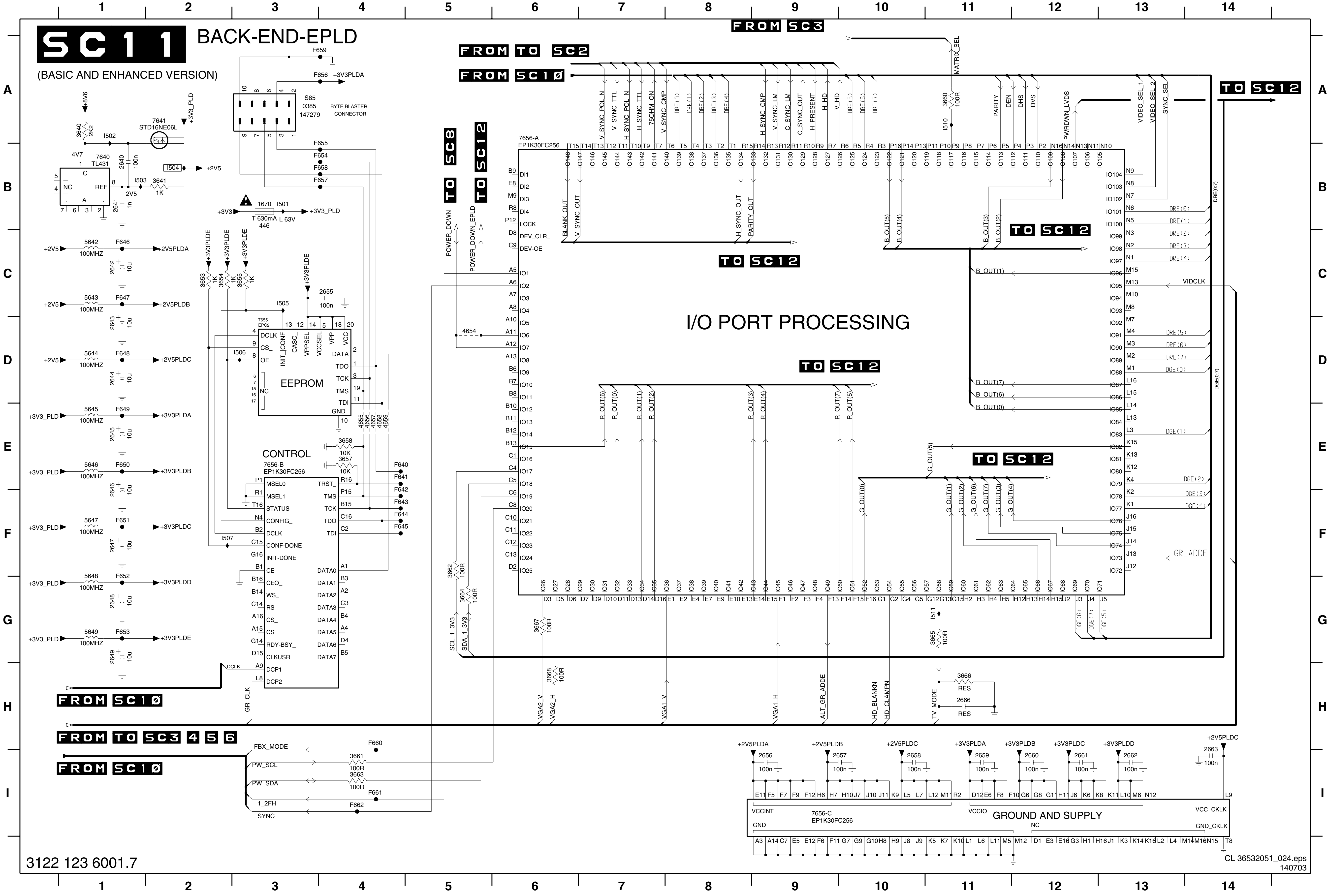
| | |
|---|---|
| 0386 | C9 |
| 1570 | C2 |
| 1575 | G6 |
| 2570 | D2 |
| 2572 | C4 |
| 2573 | C4 |
| 2574 | C6 |
| 2581 | H2 |
| 2583 | F5 |
| 2584 | F1 |
| 3016 | D3 |
| 3571 | D2 |
| 3575 | E3 |
| 3580 | F3 |
| 3581 | G3 |
| 3582 | F5 |
| 3583 | F5 |
| 3590 | D10 |
| 3591 | D10 |
| 3592 | E10 |
| 3593 | E10 |
| 3594 | H2 |
| 4572 | C6 |
| 4574 | D7 |
| 4581 | G3 |
| 4582 | G4 |
| 4591 | C10 |
| 4592 | G1 |
| 4593 | E2 |
| 5570 | C2 |
| 5572 | B3 |
| 5574 | B5 |
| 6500 | G1 |
| 6501 | G1 |
| 6502 | G1 |
| 6503 | H1 |
| 7570 | C3 |
| 7571-A | G2 |
| 7571-B | F2 |
| 7571-C | E3 |
| 7574-A | C6 |
| 7574-B | D6 |
| 7574-C | D6 |
| 7574-D | E6 |
| 7580 | F4 |
| F563 | E7 |
| F564 | E7 |
| F565 | D7 |
| F566 | B7 |
| F567 | G3 |
| F568 | G3 |
| F569 | G5 |
| F570 | C8 |
| F571 | C8 |
| F572 | C8 |
| F573 | C8 |
| F574 | C8 |
| F575 | D8 |
| F576 | D8 |
| F577 | D8 |
| F578 | D8 |
| F579 | D8 |
| F580 | D8 |
| F581 | E8 |
| F582 | E8 |
| F583 | E8 |
| F584 | E8 |
| F585 | F8 |
| F586 | F8 |
| F587 | F8 |
| F588 | F8 |
| F589 | F8 |
| F590 | F8 |
| F591 | C10 |
| F592 | C10 |
| F593 | C10 |
| F594 | C10 |
| F595 | C10 |
| F596 | D10 |
| F597 | D9 |
| F598 | D9 |
| F599 | D10 |
| F600 | D10 |
| F601 | D10 |
| F602 | D10 |
| F603 | E10 |
| F604 | E10 |
| F605 | E10 |
| F606 | E10 |
| F607 | E10 |
| F608 | E10 |
| F609 | F10 |
| F610 | F10 |
| F611 | F10 |
| F612 | F10 |
| F613 | F10 |
| I430 | C3 |
| I431 | D3 |
| I432 | B4 |
| I433 | D2 |
| I435 | H1 |
| I436 | H1 |

## SCAVIO Panel: PW164 Scaler and Memory


SC 10
SCALER
PW164 +
MEMORY
(BASIC
AND ENHANCED
VERSION)
TO SC2
FROM SC9
FROM SC3
SC7
TO SC11
TO SC6
TO SC7
FROM SC5
FROM SC4
TO SC7 9
FROM SC15
TO SC11 12
7605
PW164
I/O
PORTS
16-BIT
MICRO-
PROCESSOR
PROCESSOR ROM/RAM INTERFACE
INTERRUPT
CONTROLLER
WATCHDOG
AND
TIMERS
UART
IR
DECODERS
MICROPROCESSOR BUS
TEST
CONTROL
YUV
TO
RGB
VIDEO PORT
PIXEL
PROCESSING
PROCESSOR
MEMORY
INTERFACE
MEMORY IN BUS
PW164
INTERNAL
REGISTER
INTERFACE
CLOCK
GENERATOR
UCLK
DCLK
MCLK
OSD
GRAPHICS
PORT PIXEL
PROCESSING
SDRAM
FRAME
BUFFER
REGISTER BUS
MEMORY
CONTROLLER
VERTICAL
IMAGE
SCALAR
HORIZ.
IMAGE
SCALAR
DISPLAY
FIFO
OSD
AND
GAIN
COLOR
LOOKUP
TABLES
COLOR
SPACE
EXPANDER
MEMORY OUT BUS
ON
SCREEN
DISPLAY
SYNC
DECODER
AND TIMER
AUTOMATIC
IMAGE
OPTIMIZER
DISPLAY
TIMING
GENERATOR
VDD2.5
VSS
VDD3.3
7628
CY62126
SRAM
7630
M29W160DT
FLASH
5628
100MHZ
5630
100MHZ
6630
BAT254
PW_RESET
PW_FLASH_RESET
BOOTWE
RAMWE
RAMOE
ROMOE
ROMWE
+3V3_PW
+3V3W
+2V5
(MCLK,DCKEXT)
3122 123 6001.7
CL 36532051_023.eps
140703

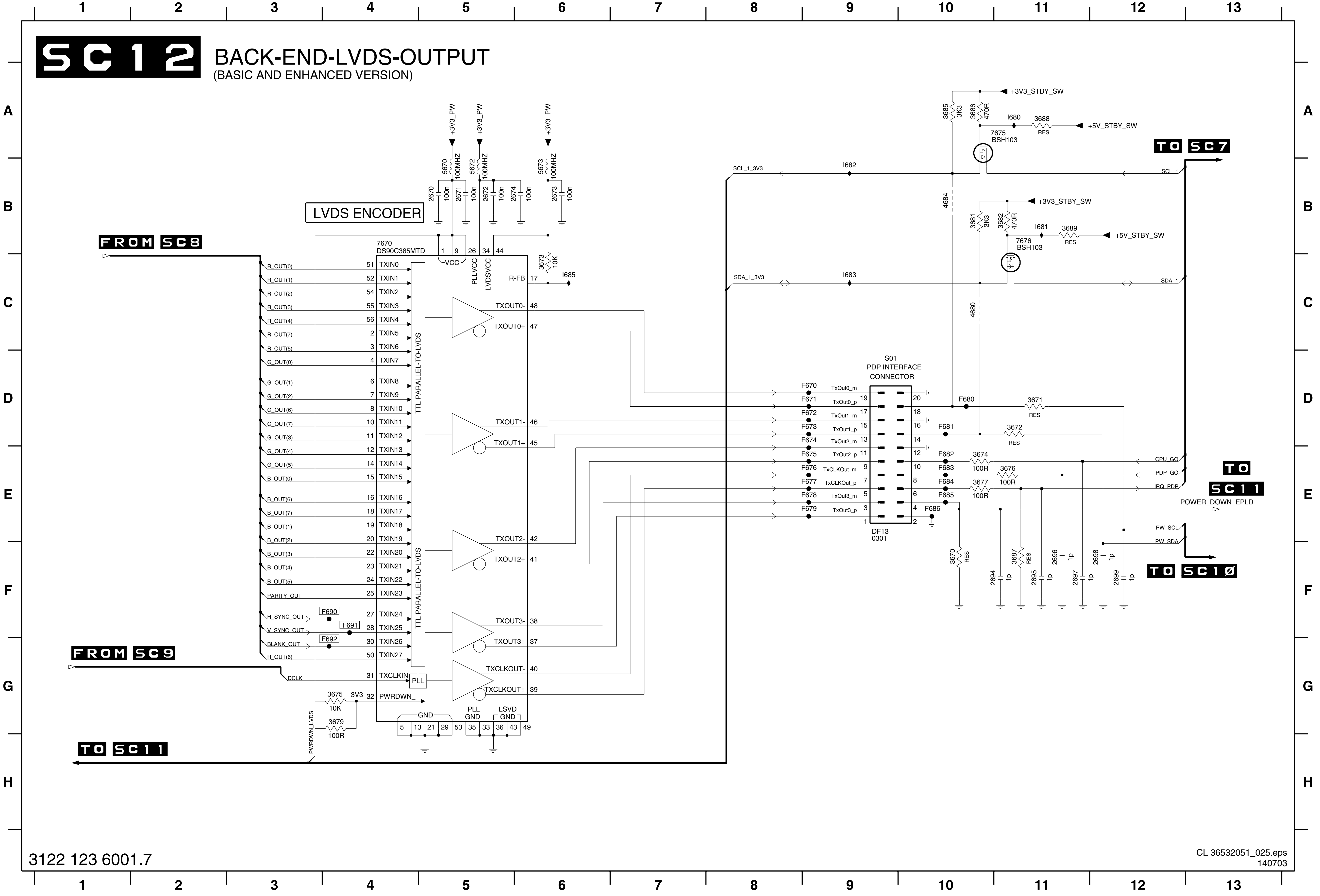
| | |
|---|---|
| 2600 | I1 |
| 2601 | I2 |
| 2602 | I2 |
| 2603 | I2 |
| 2604 | I2 |
| 2605 | I3 |
| 2606 | I3 |
| 2607 | I3 |
| 2608 | I4 |
| 2609 | I4 |
| 2610 | I4 |
| 2611 | I4 |
| 2612 | I5 |
| 2613 | I5 |
| 2614 | I5 |
| 2615 | I6 |
| 2616 | I8 |
| 2617 | I9 |
| 2618 | I9 |
| 2619 | I9 |
| 2620 | I9 |
| 2621 | I10 |
| 2622 | I10 |
| 2623 | I10 |
| 2624 | I11 |
| 2625 | I11 |
| 2628 | A12 |
| 2629 | E12 |
| 2630 | E12 |
| 3600 | A2 |
| 3601 | A2 |
| 3602 | A3 |
| 3603 | A3 |
| 3604 | A3 |
| 3605 | A2 |
| 3606 | A4 |
| 3607 | A4 |
| 3608 | A4 |
| 3609 | A4 |
| 3610 | H11 |
| 3611 | A3 |
| 3612 | A4 |
| 3613 | A5 |
| 3615 | A10 |
| 3616 | A11 |
| 3617 | A11 |
| 3620 | B11 |
| 3621 | B11 |
| 3622 | B11 |
| 3623 | B11 |
| 3625 | D1 |
| 3626 | D1 |
| 3627 | D1 |
| 3628 | A14 |
| 3630 | E13 |
| 3631 | E13 |
| 3632 | I14 |
| 3633 | I14 |
| 3634 | I14 |
| 3636 | H14 |
| 3637 | D13 |
| 3638 | A9 |
| 3639 | A9 |
| 4605 | B2 |
| 4632 | I14 |
| 5628 | A12 |
| 5630 | E12 |
| 6630 | E13 |
| 7605 | A3 |
| 7628 | A13 |
| 7630 | E13 |
| F614 | H13 |
| F615 | A2 |
| F616 | A2 |
| F617 | D12 |
| F618 | G2 |
| F619 | G2 |
| F620 | H2 |
| F621 | H2 |
| F622 | D12 |
| F623 | C11 |
| F624 | C11 |
| F625 | C11 |
| F626 | C12 |
| F627 | A4 |
| F628 | A4 |
| F629 | A13 |
| F630 | A3 |
| F631 | A3 |
| F632 | I13 |
| F633 | H2 |
| F634 | H11 |
| F635 | A4 |
| F636 | A4 |
| F637 | H11 |
| F638 | I11 |
| F639 | H11 |
| I470 | A9 |
| I471 | A9 |
| I475 | D13 |
| I480 | E13 |
| I481 | E13 |
| I482 | E14 |
| I485 | H13 |
| I486 | I13 |

## SCAVIO Panel: Back-End EPLD


SC11 BACK-END-EPLD
(BASIC AND ENHANCED VERSION)
FROM SC3
FROM TO SC2
FROM SC10
TO SC12
TO SC8
TO SC12
I/O PORT PROCESSING
7656-A EP1K30FC256
CONTROL
7656-B EP1K30FC256
EEPROM
7655 EPC2
BYTE BLASTER CONNECTOR
S85 0385 147279
7641 STD16NE06L
7640 TL431
1670 T 630mA L 63V 446
GROUND AND SUPPLY
7656-C EP1K30FC256
FROM SC10
FROM TO SC3 4 5 6
FROM SC10
FBX_MODE
PW_SCL
PW_SDA
1_2FH
SYNC
GR_CLK
DCLK
POWER_DOWN
POWER_DOWN_EPLD
SCL_1_3V3
SDA_1_3V3
VGA2_V
VGA2_H
VGA1_V
VGA1_H
ALT_GR_ADDE
HD_BLANKN
HD_CLAMPN
TV_MODE
MATRIX_SEL
PWRDWN_LVDS
VIDEO_SEL_1
VIDEO_SEL_2
SYNC_SEL
VIDCLK
GR_ADDE
3122 123 6001.7
CL 36532051_024.eps 140703

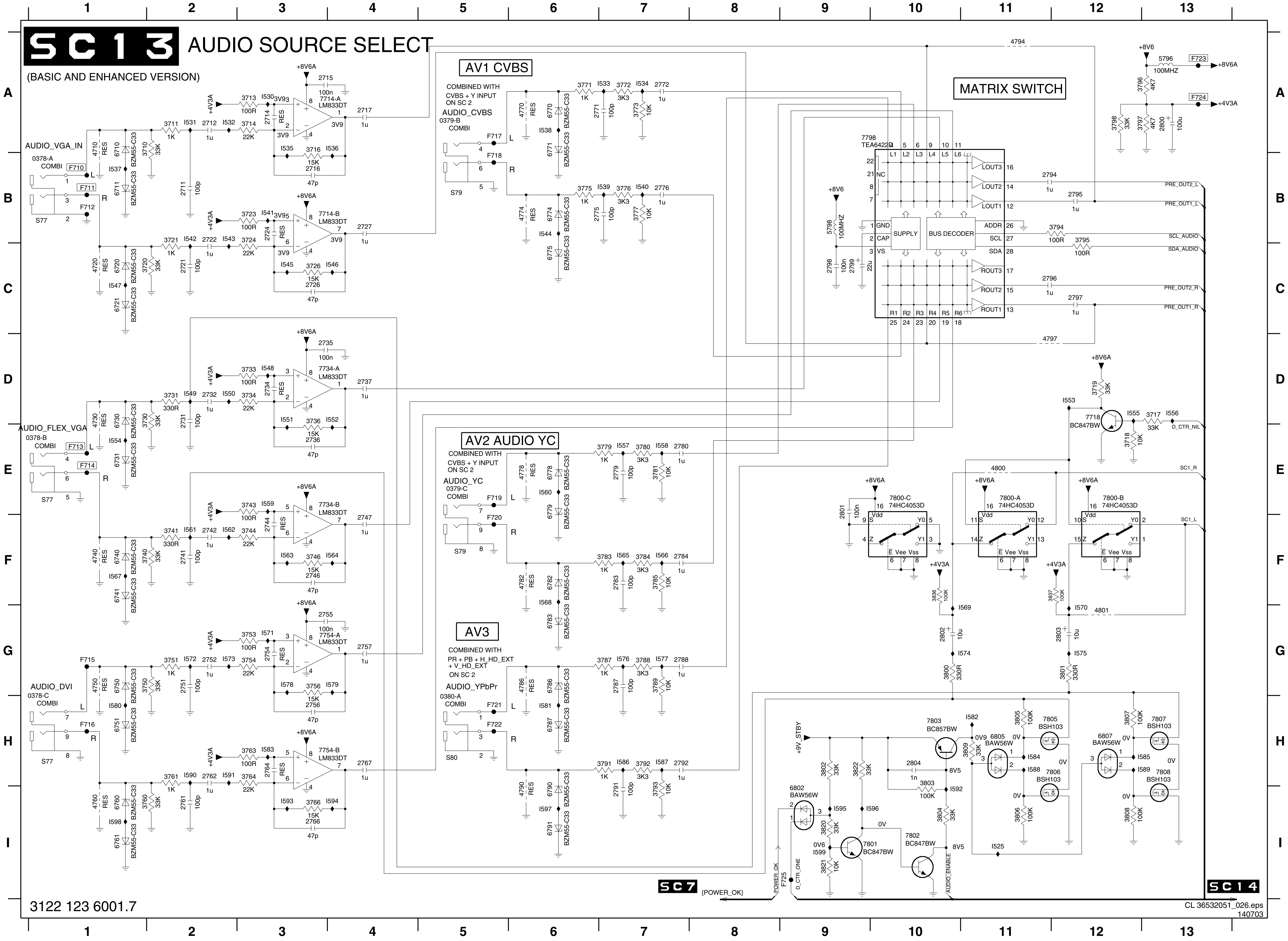
| | |
|---|---|
| 0385 | A3 |
| 1670 | B3 |
| 2640 | B1 |
| 2641 | B1 |
| 2642 | C1 |
| 2643 | D1 |
| 2644 | D1 |
| 2645 | E1 |
| 2646 | F1 |
| 2647 | F1 |
| 2648 | G1 |
| 2649 | G1 |
| 2655 | C4 |
| 2656 | I9 |
| 2657 | I10 |
| 2658 | I10 |
| 2659 | I11 |
| 2660 | I12 |
| 2661 | I12 |
| 2662 | I13 |
| 2663 | I14 |
| 2666 | H11 |
| 3640 | A1 |
| 3641 | B2 |
| 3653 | C2 |
| 3654 | C2 |
| 3655 | C3 |
| 3657 | E4 |
| 3658 | E4 |
| 3660 | A11 |
| 3661 | I4 |
| 3662 | F5 |
| 3663 | I4 |
| 3664 | G5 |
| 3665 | G11 |
| 3666 | H11 |
| 3667 | G6 |
| 3668 | H6 |
| 4654 | D5 |
| 4655 | E4 |
| 4656 | E4 |
| 4657 | E4 |
| 4658 | E4 |
| 4659 | E4 |
| 5642 | C1 |
| 5643 | C1 |
| 5644 | D1 |
| 5645 | E1 |
| 5646 | E1 |
| 5647 | F1 |
| 5648 | G1 |
| 5649 | G1 |
| 7640 | B1 |
| 7641 | A2 |
| 7655 | D3 |
| 7656-A | A6 |
| 7656-B | E3 |
| 7656-C | I9 |
| F640 | E4 |
| F641 | E4 |
| F642 | F4 |
| F643 | F4 |
| F644 | F4 |
| F645 | F4 |
| F646 | C1 |
| F647 | C1 |
| F648 | D1 |
| F649 | E1 |
| F650 | E1 |
| F651 | F1 |
| F652 | G1 |
| F653 | G1 |
| F654 | B4 |
| F655 | B4 |
| F656 | A4 |
| F657 | B4 |
| F658 | B4 |
| F659 | A4 |
| F660 | H4 |
| F661 | I4 |
| F662 | I4 |
| I501 | B3 |
| I502 | A1 |
| I503 | B1 |
| I504 | B2 |
| I505 | C3 |
| I506 | D3 |
| I507 | F2 |
| I510 | A11 |
| I511 | G11 |

## SCAVIO Panel: Back-End LVDS Output


SC12
BACK-END-LVDS-OUTPUT
(BASIC AND ENHANCED VERSION)
LVDS ENCODER
7670
DS90C385MTD
FROM SC8
FROM SC9
TO SC11
TO SC7
TO SC11
TO SC10
+3V3_PW
5670 100MHZ
5672 100MHZ
5673 100MHZ
2670 100n
2671 100n
2672 100n
2674 100n
2673 100n
3673 10K
VCC
PLLVCC
LVDSVCC
R-FB
I685
R_OUT(0)
R_OUT(1)
R_OUT(2)
R_OUT(3)
R_OUT(4)
R_OUT(7)
R_OUT(5)
G_OUT(0)
G_OUT(1)
G_OUT(2)
G_OUT(6)
G_OUT(7)
G_OUT(3)
G_OUT(4)
G_OUT(5)
B_OUT(0)
B_OUT(6)
B_OUT(7)
B_OUT(1)
B_OUT(2)
B_OUT(3)
B_OUT(4)
B_OUT(5)
PARITY_OUT
H_SYNC_OUT
V_SYNC_OUT
BLANK_OUT
R_OUT(6)
DCLK
F690
F691
F692
TXIN0 … TXIN27
TXCLKIN
PLL
PWRDWN_
TTL PARALLEL-TO-LVDS
TXOUT0-
TXOUT0+
TXOUT1-
TXOUT1+
TXOUT2-
TXOUT2+
TXOUT3-
TXOUT3+
TXCLKOUT-
TXCLKOUT+
GND
PLL GND
LSVD GND
3675 10K
3V3
3679 100R
PWRDWN_LVDS
SCL_1_3V3
SDA_1_3V3
I682
I683
+3V3_STBY_SW
+5V_STBY_SW
3685 3K3
3686 470R
I680
3688 RES
7675 BSH103
3681 3K3
3682 470R
I681
3689 RES
7676 BSH103
4684
4680
SCL_1
SDA_1
S01
PDP INTERFACE
CONNECTOR
DF13
0301
F670
F671
F672
F673
F674
F675
F676
F677
F678
F679
TxOut0_m
TxOut0_p
TxOut1_m
TxOut1_p
TxOut2_m
TxOut2_p
TxCLKOut_m
TxCLKOut_p
TxOut3_m
TxOut3_p
F680
F681
F682
F683
F684
F685
F686
3671 RES
3672 RES
3674 100R
3676 100R
3677 100R
CPU_GO
PDP_GO
IRQ_PDP
POWER_DOWN_EPLD
PW_SCL
PW_SDA
3670 RES
3687 RES
2694 1p
2695 1p
2696 1p
2697 1p
2698 1p
2699 1p
3122 123 6001.7
CL 36532051_025.eps
140703

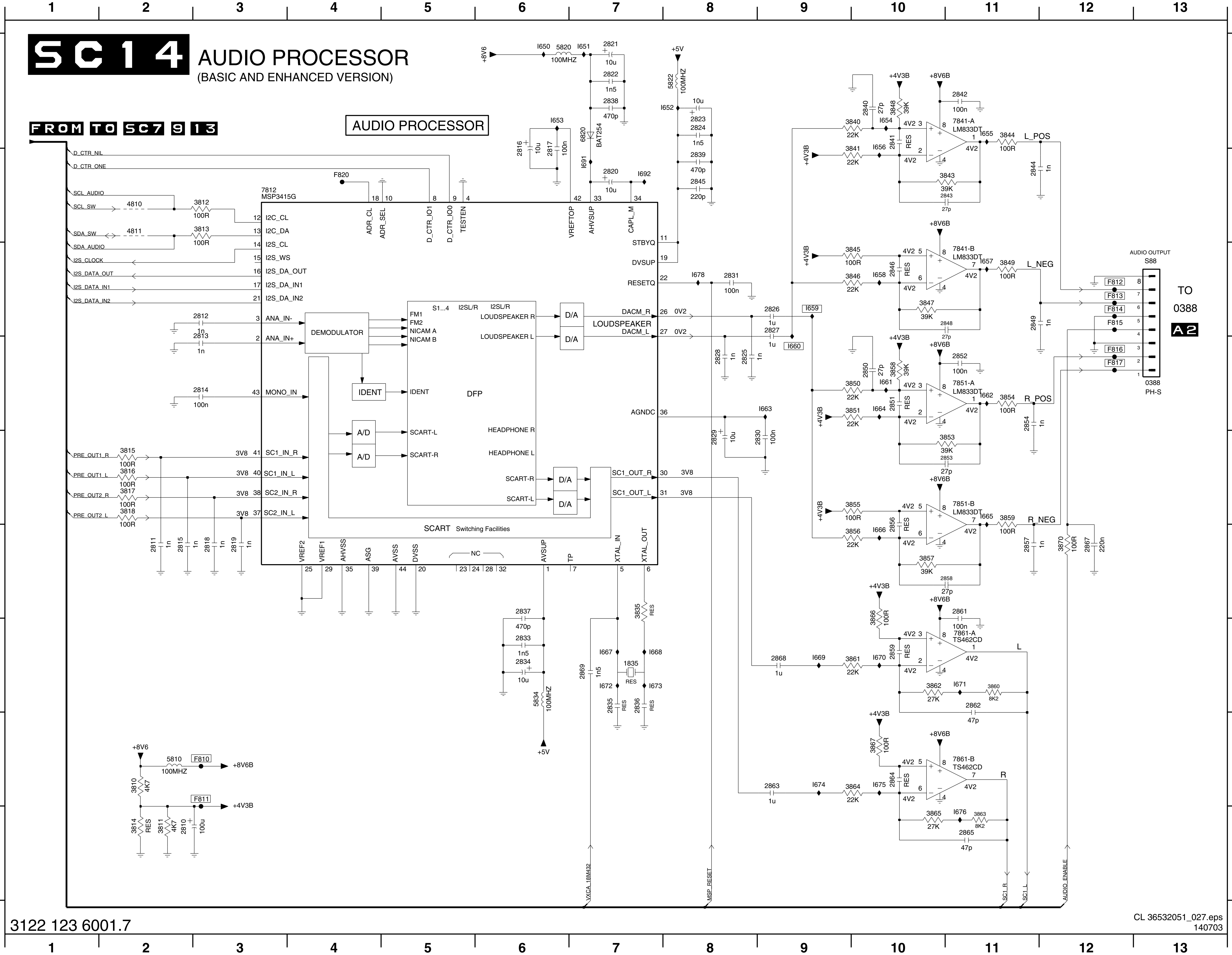
| | |
|---|---|
| 0301 | E9 |
| 2670 | B5 |
| 2671 | B5 |
| 2672 | B5 |
| 2673 | B6 |
| 2674 | B6 |
| 2694 | F11 |
| 2695 | F11 |
| 2696 | F11 |
| 2697 | F11 |
| 2698 | F12 |
| 2699 | F12 |
| 3670 | F10 |
| 3671 | D11 |
| 3672 | D11 |
| 3673 | C6 |
| 3674 | E10 |
| 3675 | G4 |
| 3676 | E11 |
| 3677 | E10 |
| 3679 | G4 |
| 3681 | B10 |
| 3682 | B11 |
| 3685 | A10 |
| 3686 | A10 |
| 3687 | F11 |
| 3688 | A11 |
| 3689 | B11 |
| 4680 | C10 |
| 4684 | B10 |
| 5670 | B5 |
| 5672 | B5 |
| 5673 | B6 |
| 7670 | B4 |
| 7675 | A11 |
| 7676 | B11 |
| F670 | D9 |
| F671 | D9 |
| F672 | D9 |
| F673 | D9 |
| F674 | D9 |
| F675 | E9 |
| F676 | E9 |
| F677 | E9 |
| F678 | E9 |
| F679 | E9 |
| F680 | D10 |
| F681 | D10 |
| F682 | E10 |
| F683 | E10 |
| F684 | E10 |
| F685 | E10 |
| F686 | E10 |
| F690 | F4 |
| F691 | F4 |
| F692 | G4 |
| I680 | A11 |
| I681 | B11 |
| I682 | B9 |
| I683 | C9 |
| I685 | C6 |

## SCAVIO Panel: Audio Source Select


SC13 AUDIO SOURCE SELECT
(BASIC AND ENHANCED VERSION)
AV1 CVBS
COMBINED WITH CVBS + Y INPUT ON SC 2
AUDIO_CVBS
0379-B COMBI
AV2 AUDIO YC
AUDIO_YC
0379-C COMBI
AV3
COMBINED WITH PR + PB + H_HD_EXT + V_HD_EXT ON SC 2
AUDIO_YPbPr
0380-A COMBI
AUDIO_VGA_IN
0378-A COMBI
AUDIO_FLEX_VGA
0378-B COMBI
AUDIO_DVI
0378-C COMBI
S77
S79
S80
7714-A LM833DT
7714-B LM833DT
7734-A LM833DT
7734-B LM833DT
7754-A LM833DT
7754-B LM833DT
+8V6A
+4V3A
BZM55-C33
MATRIX SWITCH
7798 TEA6422D
SUPPLY
BUS DECODER
GND
CAP
VS
ADDR
SCL
SDA
LOUT1
LOUT2
LOUT3
ROUT1
ROUT2
ROUT3
PRE_OUT1_L
PRE_OUT2_L
PRE_OUT1_R
PRE_OUT2_R
SCL_AUDIO
SDA_AUDIO
+8V6
5796 100MHZ
+8V6A
+4V3A
F723
F724
7718 BC847BW
D_CTR_NIL
SC1_R
SC1_L
7800-C 74HC4053D
7800-A 74HC4053D
7800-B 74HC4053D
4794
4797
4800
4801
7803 BC857BW
7801 BC847BW
7802 BC847BW
6802 BAW56W
6805 BAW56W
6807 BAW56W
7805 BSH103
7806 BSH103
7807 BSH103
7808 BSH103
+9V_STBY
POWER_OK
D_CTR_ONE
AUDIO_ENABLE
F725
SC7 (POWER_OK)
SC14
3122 123 6001.7
CL 36532051_026.eps
140703

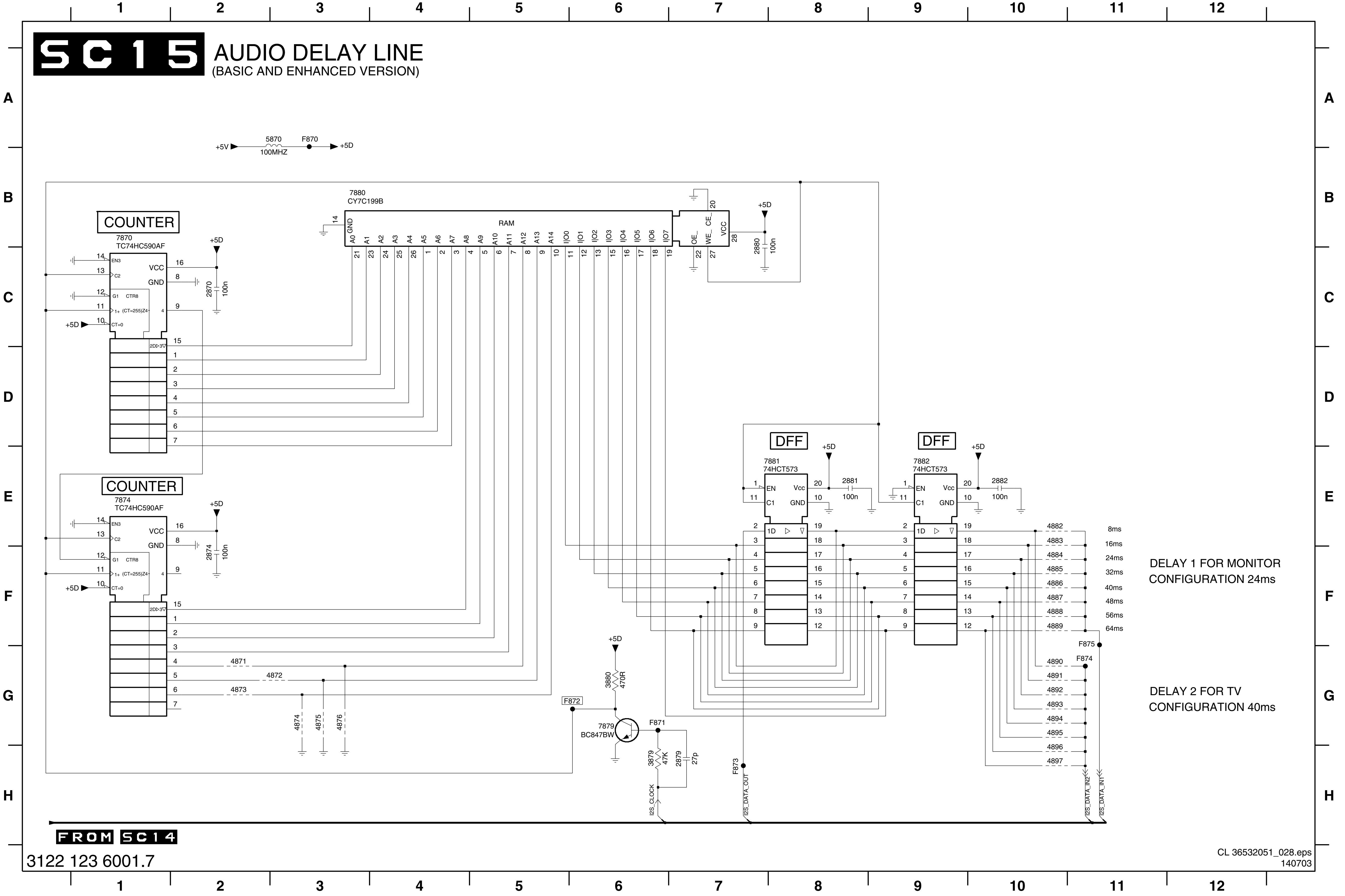
| | |
|---|---|
| 0378-A | B1 |
| 0378-B | E1 |
| 0378-C | G1 |
| 0379-B | A5 |
| 0379-C | E5 |
| 0380-A | G5 |
| 2711 | B2 |
| 2712 | A2 |
| 2714 | A3 |
| 2715 | A3 |
| 2716 | B3 |
| 2717 | A4 |
| 2721 | C2 |
| 2722 | B2 |
| 2724 | B3 |
| 2726 | C3 |
| 2727 | B4 |
| 2731 | D2 |
| 2732 | D2 |
| 2734 | D3 |
| 2735 | D3 |
| 2736 | E3 |
| 2737 | D4 |
| 2741 | F2 |
| 2742 | F2 |
| 2744 | F3 |
| 2746 | F3 |
| 2747 | F4 |
| 2751 | G2 |
| 2752 | G2 |
| 2754 | G3 |
| 2755 | G3 |
| 2756 | H3 |
| 2757 | G4 |
| 2761 | I2 |
| 2762 | H2 |
| 2764 | H3 |
| 2766 | I3 |
| 2767 | H4 |
| 2771 | A6 |
| 2772 | A7 |
| 2775 | B6 |
| 2776 | B7 |
| 2779 | E7 |
| 2780 | E7 |
| 2783 | F7 |
| 2784 | F7 |
| 2787 | G7 |
| 2788 | G7 |
| 2791 | I7 |
| 2792 | H7 |
| 2794 | B11 |
| 2795 | B12 |
| 2796 | C11 |
| 2797 | C12 |
| 2798 | C9 |
| 2799 | C9 |
| 2800 | A13 |
| 2801 | E9 |
| 2802 | G10 |
| 2803 | G12 |
| 2804 | H10 |
| 3710 | A2 |
| 3711 | A2 |
| 3713 | A3 |
| 3714 | A3 |
| 3716 | A3 |
| 3717 | D13 |
| 3718 | E12 |
| 3719 | D12 |
| 3720 | C2 |
| 3721 | B2 |
| 3723 | B3 |
| 3724 | B3 |
| 3726 | C3 |
| 3730 | D2 |
| 3731 | D2 |
| 3733 | D3 |
| 3734 | D3 |
| 3736 | D3 |
| 3740 | F2 |
| 3741 | F2 |
| 3743 | E3 |
| 3744 | F3 |
| 3746 | F3 |
| 3750 | G2 |
| 3751 | G2 |
| 3753 | G3 |
| 3754 | G3 |
| 3756 | G3 |
| 3760 | I2 |
| 3761 | H2 |
| 3763 | H3 |
| 3764 | H3 |
| 3766 | I3 |
| 3771 | A6 |
| 3772 | A7 |
| 3773 | A7 |
| 3775 | B6 |
| 3776 | B7 |
| 3777 | B7 |
| 3779 | E7 |
| 3780 | E7 |
| 3781 | E7 |
| 3783 | F7 |
| 3784 | F7 |
| 3785 | F7 |
| 3787 | G7 |
| 3788 | G7 |
| 3789 | G7 |
| 3791 | H7 |
| 3792 | H7 |
| 3793 | I7 |
| 3794 | B12 |
| 3795 | B12 |
| 3796 | A13 |
| 3797 | A13 |
| 3798 | A12 |
| 3800 | G10 |
| 3801 | G12 |
| 3802 | H9 |
| 3803 | H10 |
| 3804 | I10 |
| 3805 | H11 |
| 3806 | I11 |
| 3807 | H12 |
| 3808 | I12 |
| 3809 | H11 |
| 3820 | I9 |
| 3821 | I9 |
| 3822 | H9 |
| 3836 | F10 |
| 3837 | F12 |
| 4710 | A1 |
| 4720 | C1 |
| 4730 | D1 |
| 4740 | F1 |
| 4750 | G1 |
| 4760 | I1 |
| 4770 | A6 |
| 4774 | B6 |
| 4778 | E6 |
| 4782 | F6 |
| 4786 | G6 |
| 4790 | I6 |
| 4794 | A11 |
| 4797 | D11 |
| 4800 | E11 |
| 4801 | G12 |
| 5796 | A13 |
| 5798 | B9 |
| 6710 | A1 |
| 6711 | B1 |
| 6720 | C1 |
| 6721 | C1 |
| 6730 | D1 |
| 6731 | E1 |
| 6740 | F1 |
| 6741 | F1 |
| 6750 | G1 |
| 6751 | H1 |
| 6760 | I1 |
| 6761 | I1 |
| 6770 | A6 |
| 6771 | A6 |
| 6774 | B6 |
| 6775 | C6 |
| 6778 | E6 |
| 6779 | E6 |
| 6782 | F6 |
| 6783 | G6 |
| 6786 | G6 |
| 6787 | H6 |
| 6790 | I6 |
| 6791 | I6 |
| 6802 | I9 |
| 6805 | H11 |
| 6807 | H12 |
| 7714-A | A3 |
| 7714-B | B3 |
| 7718 | D12 |
| 7734-A | D3 |
| 7734-B | E3 |
| 7754-A | G3 |
| 7754-B | H3 |
| 7798 | A9 |
| 7800-A | E11 |
| 7800-B | E12 |
| 7800-C | E10 |
| 7801 | I9 |
| 7802 | I10 |
| 7803 | H10 |
| 7805 | H11 |
| 7806 | H12 |
| 7807 | H13 |
| 7808 | H13 |
| F710 | B1 |
| F711 | B1 |
| F712 | B1 |
| F713 | E1 |
| F714 | E1 |
| F715 | G1 |
| F716 | H1 |
| F717 | A5 |
| F718 | B5 |
| F719 | E5 |
| F720 | F5 |
| F721 | H5 |
| F722 | H5 |
| F723 | A13 |
| F724 | A13 |
| F725 | I9 |
| I525 | I11 |
| I530 | A3 |
| I531 | A2 |
| I532 | A2 |
| I533 | A7 |
| I534 | A7 |
| I535 | A3 |
| I536 | A4 |
| I537 | B1 |
| I538 | A6 |
| I539 | B7 |
| I540 | B7 |
| I541 | B3 |
| I542 | B2 |
| I543 | B2 |
| I544 | B6 |
| I545 | C3 |
| I546 | C4 |
| I547 | C1 |
| I548 | D3 |
| I549 | D2 |
| I550 | D2 |
| I551 | D3 |
| I552 | D4 |
| I553 | D12 |
| I554 | E1 |
| I555 | D12 |
| I556 | D13 |
| I557 | E7 |
| I558 | E7 |
| I559 | E3 |
| I560 | E6 |
| I561 | F2 |
| I562 | F2 |
| I563 | F3 |
| I564 | F4 |
| I565 | F7 |
| I566 | F7 |
| I567 | F1 |
| I568 | F6 |
| I569 | G11 |
| I570 | G12 |
| I571 | G3 |
| I572 | G2 |
| I573 | G2 |
| I574 | G11 |
| I575 | G12 |
| I576 | G7 |
| I577 | G7 |
| I578 | G3 |
| I579 | G4 |
| I580 | H1 |
| I581 | H6 |
| I582 | H11 |
| I583 | H3 |
| I584 | H11 |
| I585 | H13 |
| I586 | H7 |
| I587 | H7 |
| I588 | H11 |
| I589 | H13 |
| I590 | H2 |
| I591 | H2 |
| I592 | I10 |
| I593 | I3 |
| I594 | I4 |
| I595 | I9 |
| I596 | I10 |
| I597 | I6 |
| I598 | I1 |
| I599 | I9 |

## SCAVIO Panel: Audio Processor


SC14
AUDIO PROCESSOR
(BASIC AND ENHANCED VERSION)
FROM TO SC7 9 13
AUDIO PROCESSOR
7812
MSP3415G
D_CTR_NIL
D_CTR_ONE
SCL_AUDIO
SCL_SW
SDA_SW
SDA_AUDIO
I2S_CLOCK
I2S_DATA_OUT
I2S_DATA_IN1
I2S_DATA_IN2
PRE_OUT1_R
PRE_OUT1_L
PRE_OUT2_R
PRE_OUT2_L
I2C_CL
I2C_DA
I2S_CL
I2S_WS
I2S_DA_OUT
I2S_DA_IN1
I2S_DA_IN2
ANA_IN-
ANA_IN+
MONO_IN
SC1_IN_R
SC1_IN_L
SC2_IN_R
SC2_IN_L
DEMODULATOR
IDENT
A/D
D/A
DFP
LOUDSPEAKER
SCART Switching Facilities
ADR_CL
ADR_SEL
D_CTR_IO1
D_CTR_IO0
TESTEN
VREFTOP
AHVSUP
CAPL_M
STBYQ
DVSUP
RESETQ
DACM_R
DACM_L
AGNDC
SC1_OUT_R
SC1_OUT_L
VREF2
VREF1
AHVSS
ASG
AVSS
DVSS
NC
AVSUP
TP
XTAL_IN
XTAL_OUT
+8V6
+5V
+8V6B
+4V3B
7841-A LM833DT
7841-B LM833DT
7851-A LM833DT
7851-B LM833DT
7861-A TS462CD
7861-B TS462CD
L_POS
L_NEG
R_POS
R_NEG
L
R
AUDIO OUTPUT
S88
TO
0388
A2
0388
PH-S
1835
BAT254
VXCA_18M432
MSP_RESET
SC1_R
SC1_L
AUDIO_ENABLE
3122 123 6001.7
CL 36532051_027.eps
140703

| | |
|---|---|
| 0388 | D13 |
| 1835 | G7 |
| 2810 | I2 |
| 2811 | F2 |
| 2812 | C3 |
| 2813 | D3 |
| 2814 | D3 |
| 2815 | F2 |
| 2816 | B6 |
| 2817 | B6 |
| 2818 | F3 |
| 2819 | F3 |
| 2820 | B7 |
| 2821 | A7 |
| 2822 | A7 |
| 2823 | A8 |
| 2824 | A8 |
| 2825 | D8 |
| 2826 | C9 |
| 2827 | C9 |
| 2828 | D8 |
| 2829 | E8 |
| 2830 | E9 |
| 2831 | C8 |
| 2833 | G6 |
| 2834 | G6 |
| 2835 | G7 |
| 2836 | G7 |
| 2837 | F6 |
| 2838 | A7 |
| 2839 | B8 |
| 2840 | A10 |
| 2841 | A10 |
| 2842 | A11 |
| 2843 | B11 |
| 2844 | B11 |
| 2845 | B8 |
| 2846 | C10 |
| 2848 | C11 |
| 2849 | C11 |
| 2850 | D10 |
| 2851 | D10 |
| 2852 | D11 |
| 2853 | E11 |
| 2854 | D11 |
| 2856 | F10 |
| 2857 | F11 |
| 2858 | F11 |
| 2859 | G10 |
| 2861 | F11 |
| 2862 | G11 |
| 2863 | H9 |
| 2864 | H10 |
| 2865 | I11 |
| 2867 | F12 |
| 2868 | G9 |
| 2869 | G7 |
| 3810 | H2 |
| 3811 | I2 |
| 3812 | B3 |
| 3813 | B3 |
| 3814 | I2 |
| 3815 | E2 |
| 3816 | E2 |
| 3817 | E2 |
| 3818 | E2 |
| 3835 | F7 |
| 3840 | A10 |
| 3841 | B10 |
| 3843 | B11 |
| 3844 | A11 |
| 3845 | C10 |
| 3846 | C10 |
| 3847 | C10 |
| 3848 | A10 |
| 3849 | C11 |
| 3850 | D10 |
| 3851 | D10 |
| 3853 | E11 |
| 3854 | D11 |
| 3855 | E10 |
| 3856 | F10 |
| 3857 | F10 |
| 3858 | D10 |
| 3859 | E11 |
| 3860 | G11 |
| 3861 | G10 |
| 3862 | G10 |
| 3863 | I11 |
| 3864 | H10 |
| 3865 | I10 |
| 3866 | F10 |
| 3867 | H10 |
| 3870 | F12 |
| 4810 | B2 |
| 4811 | B2 |
| 5810 | H2 |
| 5820 | A6 |
| 5822 | A8 |
| 5834 | G6 |
| 6820 | A7 |
| 7812 | B3 |
| 7841-A | A11 |
| 7841-B | C11 |
| 7851-A | D11 |
| 7851-B | E11 |
| 7861-A | G11 |
| 7861-B | H11 |
| F810 | H3 |
| F811 | H3 |
| F812 | C12 |
| F813 | C12 |
| F814 | C12 |
| F815 | C12 |
| F816 | D12 |
| F817 | D12 |
| F820 | B4 |
| I650 | A6 |
| I651 | A7 |
| I652 | A8 |
| I653 | A6 |
| I654 | A10 |
| I655 | A11 |
| I656 | A10 |
| I657 | C11 |
| I658 | C10 |
| I659 | C9 |
| I660 | D9 |
| I661 | D10 |
| I662 | D11 |
| I663 | D9 |
| I664 | D10 |
| I665 | E11 |
| I666 | F10 |
| I667 | G7 |
| I668 | G7 |
| I669 | G9 |
| I670 | G10 |
| I671 | G11 |
| I672 | G7 |
| I673 | G7 |
| I674 | H9 |
| I675 | H10 |
| I676 | I11 |
| I678 | C8 |
| I691 | B7 |
| I692 | B7 |

## SCAVIO Panel: Audio Delay Line


SC15
AUDIO DELAY LINE
(BASIC AND ENHANCED VERSION)
+5V
5870
100MHZ
F870
+5D
COUNTER
7870
TC74HC590AF
COUNTER
7874
TC74HC590AF
EN3
C2
G1
CTR8
1+ (CT=255)Z4
CT=0
2D▷3▽
VCC
GND
2870
100n
2874
100n
7880
CY7C199B
RAM
GND
A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12 A13 A14
IO0 IO1 IO2 IO3 IO4 IO5 IO6 IO7
OE_
WE_
CE_
VCC
2880
100n
DFF
7881
74HCT573
DFF
7882
74HCT573
EN
C1
1D
Vcc
GND
2881
100n
2882
100n
4871
4872
4873
4874
4875
4876
3880
470R
F872
7879
BC847BW
F871
3879
47K
2879
27p
F873
4882 8ms
4883 16ms
4884 24ms
4885 32ms
4886 40ms
4887 48ms
4888 56ms
4889 64ms
F875
F874
4890
4891
4892
4893
4894
4895
4896
4897
DELAY 1 FOR MONITOR
CONFIGURATION 24ms
DELAY 2 FOR TV
CONFIGURATION 40ms
I2S_CLOCK
I2S_DATA_OUT
I2S_DATA_IN2
I2S_DATA_IN1
FROM SC14
3122 123 6001.7
CL 36532051_028.eps
140703

| | |
|---|---|
| 2870 | C2 |
| 2874 | F2 |
| 2879 | H7 |
| 2880 | B7 |
| 2881 | E8 |
| 2882 | E10 |
| 3879 | H6 |
| 3880 | G6 |
| 4871 | G2 |
| 4872 | G3 |
| 4873 | G2 |
| 4874 | G3 |
| 4875 | G3 |
| 4876 | G3 |
| 4882 | E10 |
| 4883 | E10 |
| 4884 | F10 |
| 4885 | F10 |
| 4886 | F10 |
| 4887 | F10 |
| 4888 | F10 |
| 4889 | F10 |
| 4890 | G10 |
| 4891 | G10 |
| 4892 | G10 |
| 4893 | G10 |
| 4894 | G10 |
| 4895 | G10 |
| 4896 | G10 |
| 4897 | H10 |
| 5870 | A3 |
| 7870 | B1 |
| 7874 | E1 |
| 7879 | G6 |
| 7880 | B3 |
| 7881 | E7 |
| 7882 | E9 |
| F870 | A3 |
| F871 | G6 |
| F872 | G6 |
| F873 | H7 |
| F874 | G11 |
| F875 | F11 |

## Layout SCAVIO Panel (Overview Top Side)

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0301 | A3 | 1575 | A3 | 2107 | B7 | 2150 | A7 | 2228 | C6 | 2328 | A6 | 2522 | B1 | 2645 | B2 | 3004 | C8 | 3078 | C8 | 3105 | B8 | 3133 | B5 | 3161 | B7 | 3200 | B5 | 3284 | B6 | 3330 | A6 | 3378 | B5 | 3426 | C2 | 3519 | B3 | 3611 | A4 | 3880 | A8 | 4215 | C6 | 4890 | A8 | 5223 | C6 | 6010 | C8 | 6319 | C1 | 6711 | C3 | 7040 | A8 | 7135 | B8 | 7333 | B6 |
| 0305 | A2 | 1670 | A1 | 2108 | B7 | 2151 | B5 | 2252 | C6 | 2335 | B5 | 2523 | B3 | 2646 | A2 | 3005 | C8 | 3079 | C8 | 3106 | C8 | 3134 | B8 | 3162 | B5 | 3203 | B5 | 3285 | B6 | 3331 | A6 | 3379 | B5 | 3427 | C2 | 3520 | B3 | 3625 | A3 | 3900 | C3 | 4216 | C6 | 4891 | A8 | 5224 | C6 | 6071 | C8 | 6320 | C1 | 6720 | C2 | 7041 | A8 | 7138 | C7 | 7340 | B1 |
| 0315 | A6 | 1835 | B8 | 2109 | B7 | 2152 | B5 | 2253 | C6 | 2336 | C3 | 2524 | B1 | 2647 | A2 | 3006 | C8 | 3080 | C8 | 3107 | C8 | 3135 | B8 | 3163 | B8 | 3204 | B5 | 3286 | B6 | 3333 | A5 | 3380 | B2 | 3428 | C2 | 3536 | A5 | 3626 | A3 | 3905 | A6 | 4220 | C8 | 4892 | A8 | 5226 | C6 | 6076 | C8 | 6321 | C1 | 6721 | C2 | 7074 | C7 | 7141 | B8 | 7352 | C1 |
| 0316 | A5 | 2002 | C8 | 2110 | B7 | 2153 | B7 | 2254 | C6 | 2337 | B3 | 2530 | A6 | 2648 | A3 | 3008 | C8 | 3081 | C8 | 3108 | B7 | 3136 | B8 | 3164 | C8 | 3205 | B5 | 3289 | B6 | 3334 | A5 | 3381 | B2 | 3429 | C2 | 3540 | A7 | 3627 | A3 | 3906 | A6 | 4381 | B3 | 4893 | A8 | 5228 | B5 | 6091 | C8 | 6322 | C1 | 6730 | C2 | 7075 | C7 | 7145 | A7 | 7364 | C1 |
| 0318 | A6 | 2003 | C8 | 2111 | B8 | 2156 | A7 | 2260 | C6 | 2338 | C3 | 2541 | A7 | 2649 | A2 | 3009 | B3 | 3082 | C8 | 3109 | B7 | 3137 | C7 | 3165 | B7 | 3209 | C5 | 3290 | B6 | 3336 | B3 | 3382 | B2 | 3448 | B1 | 3541 | A7 | 3640 | A1 | 3907 | A6 | 4500 | C1 | 4894 | A8 | 5300 | A6 | 6105 | B7 | 6323 | C1 | 6731 | C2 | 7079 | C8 | 7146 | B8 | 7370 | B5 |
| 0319 | A6 | 2004 | C8 | 2112 | B7 | 2157 | B8 | 2261 | C6 | 2340 | B1 | 2543 | A6 | 2657 | A3 | 3010 | C8 | 3083 | C8 | 3110 | C8 | 3138 | C7 | 3166 | B5 | 3210 | C5 | 3291 | B6 | 3337 | B3 | 3383 | B2 | 3449 | B1 | 3542 | A7 | 3641 | A1 | 3909 | A5 | 4572 | A5 | 4895 | A8 | 5302 | B7 | 6166 | B8 | 6324 | C1 | 6740 | C2 | 7080 | C8 | 7148 | A7 | 7383 | B2 |
| 0320 | A1 | 2005 | C8 | 2113 | B7 | 2158 | B5 | 2262 | C6 | 2343 | C1 | 2544 | A6 | 2662 | A3 | 3011 | C8 | 3084 | C8 | 3111 | C7 | 3139 | C7 | 3170 | A6 | 3213 | C6 | 3292 | B6 | 3338 | B3 | 3385 | B3 | 3451 | B1 | 3543 | A7 | 3655 | A2 | 3913 | C1 | 4574 | A5 | 4896 | A8 | 5350 | C1 | 6200 | C5 | 6353 | C1 | 6741 | C2 | 7084 | C8 | 7151 | A7 | 7432 | C2 |
| 0375 | C6 | 2008 | C8 | 2114 | C8 | 2159 | B7 | 2263 | C6 | 2351 | C1 | 2557 | A6 | 2663 | A3 | 3012 | C8 | 3085 | C8 | 3112 | C7 | 3140 | B8 | 3171 | A6 | 3214 | C6 | 3293 | B6 | 3339 | B3 | 3386 | B3 | 3452 | C1 | 3544 | A7 | 3657 | A3 | 3914 | A1 | 4654 | A2 | 4897 | A8 | 5352 | C1 | 6201 | C5 | 6354 | C1 | 6750 | C2 | 7085 | C8 | 7154 | B7 | 7433 | C2 |
| 0376 | C1 | 2012 | C8 | 2115 | C7 | 2161 | C8 | 2264 | C6 | 2352 | C1 | 2558 | A6 | 2799 | B8 | 3013 | C8 | 3086 | B8 | 3113 | B7 | 3141 | B8 | 3172 | A6 | 3215 | C6 | 3297 | B6 | 3340 | B1 | 3387 | B3 | 3453 | C1 | 3545 | A6 | 3658 | A3 | 3915 | B1 | 4659 | A2 | 4898 | A1 | 5520 | A2 | 6202 | C6 | 6355 | C1 | 6751 | C2 | 7088 | C8 | 7157 | A7 | 7506 | B1 |
| 0378 | C2 | 2014 | C8 | 2116 | C8 | 2164 | C8 | 2265 | C7 | 2353 | C1 | 2559 | A6 | 2800 | C3 | 3014 | C8 | 3087 | C8 | 3114 | B8 | 3142 | B8 | 3173 | B7 | 3216 | C6 | 3298 | B5 | 3346 | B1 | 3389 | B3 | 3460 | B1 | 3546 | A7 | 3660 | B8 | 3918 | B5 | 4710 | C3 | 5089 | B8 | 5524 | B1 | 6203 | C6 | 6356 | C1 | 6760 | C2 | 7089 | B8 | 7158 | B8 | 7540 | A7 |
| 0379 | C7 | 2015 | C8 | 2117 | C8 | 2165 | C8 | 2266 | C6 | 2354 | C1 | 2560 | A6 | 2802 | C3 | 3015 | C8 | 3088 | C8 | 3115 | B7 | 3144 | A6 | 3174 | B7 | 3217 | C6 | 3299 | B6 | 3351 | B6 | 3390 | B3 | 3461 | B1 | 3547 | A7 | 3667 | B6 | 3919 | A5 | 4720 | C2 | 5090 | B8 | 5541 | A7 | 6204 | C5 | 6357 | C1 | 6761 | C2 | 7090 | C7 | 7160 | B7 | 7570 | A4 |
| 0380 | C8 | 2021 | C8 | 2118 | C7 | 2166 | B8 | 2267 | C6 | 2355 | C1 | 2562 | A7 | 2803 | C3 | 3016 | A5 | 3089 | C8 | 3116 | C8 | 3145 | A7 | 3175 | B7 | 3218 | C6 | 3304 | B6 | 3352 | C1 | 3391 | B3 | 3462 | B1 | 3556 | A1 | 3668 | B6 | 3920 | A5 | 4730 | C2 | 5140 | A7 | 5570 | A4 | 6205 | C5 | 6365 | C1 | 6770 | C8 | 7100 | B7 | 7165 | B8 | 7574 | A5 |
| 0381 | C7 | 2030 | C8 | 2119 | C6 | 2167 | B8 | 2268 | C7 | 2365 | C1 | 2563 | A7 | 2810 | A8 | 3040 | A8 | 3090 | B7 | 3117 | B8 | 3146 | A7 | 3176 | B7 | 3219 | B5 | 3305 | B3 | 3353 | C1 | 3392 | B3 | 3463 | B1 | 3557 | A6 | 3679 | A3 | 3922 | B1 | 4740 | C2 | 5161 | C8 | 5572 | A5 | 6206 | C5 | 6366 | C1 | 6771 | C8 | 7102 | B7 | 7170 | B5 | 7580 | A4 |
| 0382 | A1 | 2040 | A8 | 2120 | C8 | 2168 | B8 | 2269 | C7 | 2370 | A5 | 2564 | A7 | 2816 | B8 | 3041 | A8 | 3091 | C7 | 3118 | C8 | 3147 | A6 | 3177 | B7 | 3220 | A8 | 3306 | A5 | 3354 | C1 | 3393 | B3 | 3464 | B1 | 3558 | A6 | 3687 | B3 | 3924 | C1 | 4750 | C2 | 5164 | C8 | 5574 | A5 | 6207 | C5 | 6378 | B5 | 6774 | C7 | 7103 | B7 | 7175 | C5 | 7605 | B4 |
| 0383 | B2 | 2041 | A8 | 2123 | C7 | 2195 | B5 | 2270 | C7 | 2372 | B5 | 2565 | A7 | 2820 | B8 | 3042 | A8 | 3092 | C8 | 3119 | C8 | 3148 | B7 | 3178 | B8 | 3250 | B7 | 3308 | A6 | 3355 | C1 | 3394 | B3 | 3483 | C2 | 3559 | A6 | 3710 | C3 | 3925 | C1 | 4760 | C2 | 5166 | B8 | 5628 | A3 | 6208 | C5 | 6379 | B5 | 6775 | C7 | 7104 | B8 | 7215 | C6 | 7628 | A3 |
| 0384 | B2 | 2042 | A8 | 2124 | C7 | 2196 | B5 | 2274 | C7 | 2375 | B5 | 2566 | A6 | 2821 | B8 | 3043 | A8 | 3093 | C7 | 3120 | C8 | 3149 | A7 | 3179 | B7 | 3251 | B7 | 3309 | A6 | 3359 | A6 | 3397 | B3 | 3484 | C2 | 3560 | A6 | 3720 | C2 | 3926 | C1 | 4770 | C8 | 5167 | B8 | 5642 | A2 | 6209 | C5 | 6388 | B3 | 6778 | C7 | 7105 | B8 | 7225 | B6 | 7640 | A1 |
| 0385 | A1 | 2060 | A7 | 2127 | B8 | 2197 | C5 | 2275 | C7 | 2376 | B5 | 2570 | A4 | 2823 | B8 | 3044 | A8 | 3094 | B8 | 3121 | B8 | 3150 | A6 | 3180 | B8 | 3260 | B7 | 3310 | A6 | 3363 | C3 | 3398 | B2 | 3485 | C2 | 3570 | A1 | 3730 | C2 | 3927 | C1 | 4774 | C7 | 5170 | C8 | 5643 | A3 | 6210 | C6 | 6393 | B3 | 6779 | C7 | 7107 | B7 | 7280 | B6 | 7641 | A1 |
| 0387 | A8 | 2072 | C7 | 2128 | B7 | 2198 | C4 | 2276 | C7 | 2383 | B2 | 2572 | A4 | 2829 | B8 | 3045 | A8 | 3095 | C8 | 3122 | B7 | 3151 | A7 | 3181 | B8 | 3261 | C6 | 3311 | A6 | 3364 | C1 | 3401 | B2 | 3486 | C2 | 3571 | A4 | 3740 | C2 | 3928 | C1 | 4778 | C7 | 5175 | B7 | 5644 | A3 | 6214 | C6 | 6399 | B3 | 6782 | C7 | 7110 | B7 | 7308 | A6 | 7655 | A2 |
| 0388 | A8 | 2077 | C8 | 2134 | B8 | 2199 | C5 | 2277 | C7 | 2433 | B2 | 2573 | A5 | 2831 | B8 | 3050 | A8 | 3096 | C8 | 3123 | C8 | 3152 | A7 | 3182 | B8 | 3262 | B7 | 3316 | A5 | 3365 | C1 | 3402 | C2 | 3487 | C2 | 3572 | A6 | 3750 | C2 | 4008 | A1 | 4782 | C7 | 5180 | B7 | 5646 | A2 | 6274 | C8 | 6508 | B3 | 6783 | C7 | 7111 | B7 | 7309 | B6 | 7656 | A2 |
| 1100 | A2 | 2082 | C8 | 2137 | C7 | 2217 | C6 | 2278 | C7 | 2435 | B2 | 2574 | A5 | 2834 | B8 | 3051 | A8 | 3097 | B8 | 3124 | C7 | 3153 | B6 | 3183 | B7 | 3263 | B7 | 3318 | A6 | 3366 | C1 | 3404 | C2 | 3488 | C2 | 3573 | A6 | 3760 | C2 | 4011 | A1 | 4786 | C8 | 5196 | B5 | 5647 | A2 | 6276 | C6 | 6509 | B3 | 6786 | C8 | 7112 | B7 | 7311 | A6 | 7670 | A3 |
| 1105 | A7 | 2088 | C8 | 2140 | B8 | 2220 | C6 | 2279 | C7 | 2437 | B2 | 2583 | A4 | 2870 | A8 | 3071 | C8 | 3098 | B8 | 3125 | C8 | 3154 | B7 | 3184 | B7 | 3271 | B7 | 3319 | A6 | 3370 | A5 | 3406 | C2 | 3489 | C2 | 3575 | A4 | 3809 | C3 | 4146 | B8 | 4790 | C8 | 5197 | B5 | 5648 | A3 | 6277 | C6 | 6551 | C1 | 6787 | C8 | 7113 | B7 | 7318 | A6 | 7870 | A7 |
| 1170 | C4 | 2089 | B7 | 2142 | A7 | 2221 | B7 | 2300 | A6 | 2438 | B2 | 2628 | A3 | 2874 | A7 | 3072 | C7 | 3099 | B7 | 3126 | B8 | 3155 | B7 | 3186 | B7 | 3274 | C8 | 3320 | A6 | 3371 | A5 | 3410 | C2 | 3496 | B3 | 3578 | C1 | 3810 | A8 | 4152 | B8 | 4871 | A8 | 5198 | C4 | 5649 | A2 | 6278 | C7 | 6552 | C1 | 6790 | C8 | 7115 | B7 | 7319 | B5 | 7874 | A7 |
| 1171 | B5 | 2090 | C7 | 2143 | A7 | 2222 | C7 | 2301 | A6 | 2446 | B2 | 2640 | A1 | 2879 | A8 | 3073 | C7 | 3100 | C8 | 3127 | B8 | 3156 | A6 | 3188 | B7 | 3275 | C6 | 3321 | A6 | 3373 | A5 | 3413 | C2 | 3502 | B1 | 3580 | A4 | 3811 | A8 | 4158 | B7 | 4872 | A8 | 5199 | C5 | 5810 | A8 | 6302 | B7 | 6553 | C1 | 6791 | C8 | 7117 | C8 | 7320 | B3 | 7879 | A8 |
| 1250 | C6 | 2097 | C8 | 2144 | A7 | 2223 | C6 | 2302 | B7 | 2447 | C2 | 2641 | A1 | 2881 | A8 | 3074 | C7 | 3101 | C7 | 3128 | B8 | 3157 | A7 | 3189 | B8 | 3276 | C7 | 3323 | A5 | 3374 | A5 | 3414 | C2 | 3503 | B1 | 3581 | A4 | 3814 | A8 | 4200 | B5 | 4873 | A8 | 5210 | C6 | 5820 | B8 | 6315 | C1 | 6554 | C1 | 6820 | B8 | 7121 | C8 | 7321 | B3 | 7880 | A8 |
| 1270 | B7 | 2103 | C7 | 2145 | B8 | 2224 | C6 | 2308 | A6 | 2499 | B1 | 2642 | A2 | 3001 | C8 | 3075 | C7 | 3102 | B7 | 3129 | B8 | 3158 | A7 | 3193 | C7 | 3277 | C8 | 3324 | A5 | 3375 | B5 | 3415 | C2 | 3506 | B1 | 3582 | A4 | 3836 | C4 | 4201 | B5 | 4874 | A8 | 5214 | C6 | 5834 | B8 | 6316 | C1 | 6555 | C1 | 6821 | B3 | 7129 | B8 | 7322 | B3 | 7881 | A8 |
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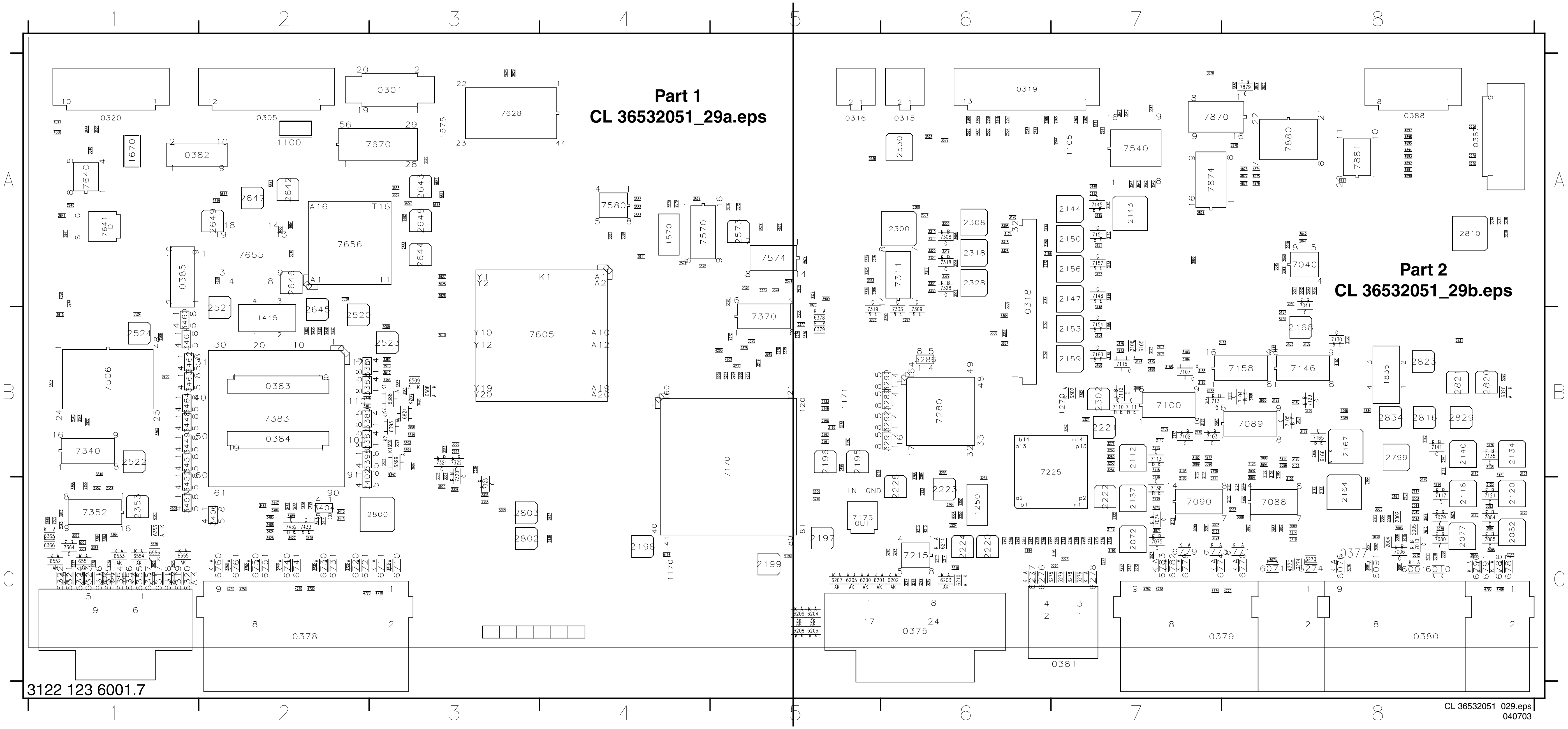

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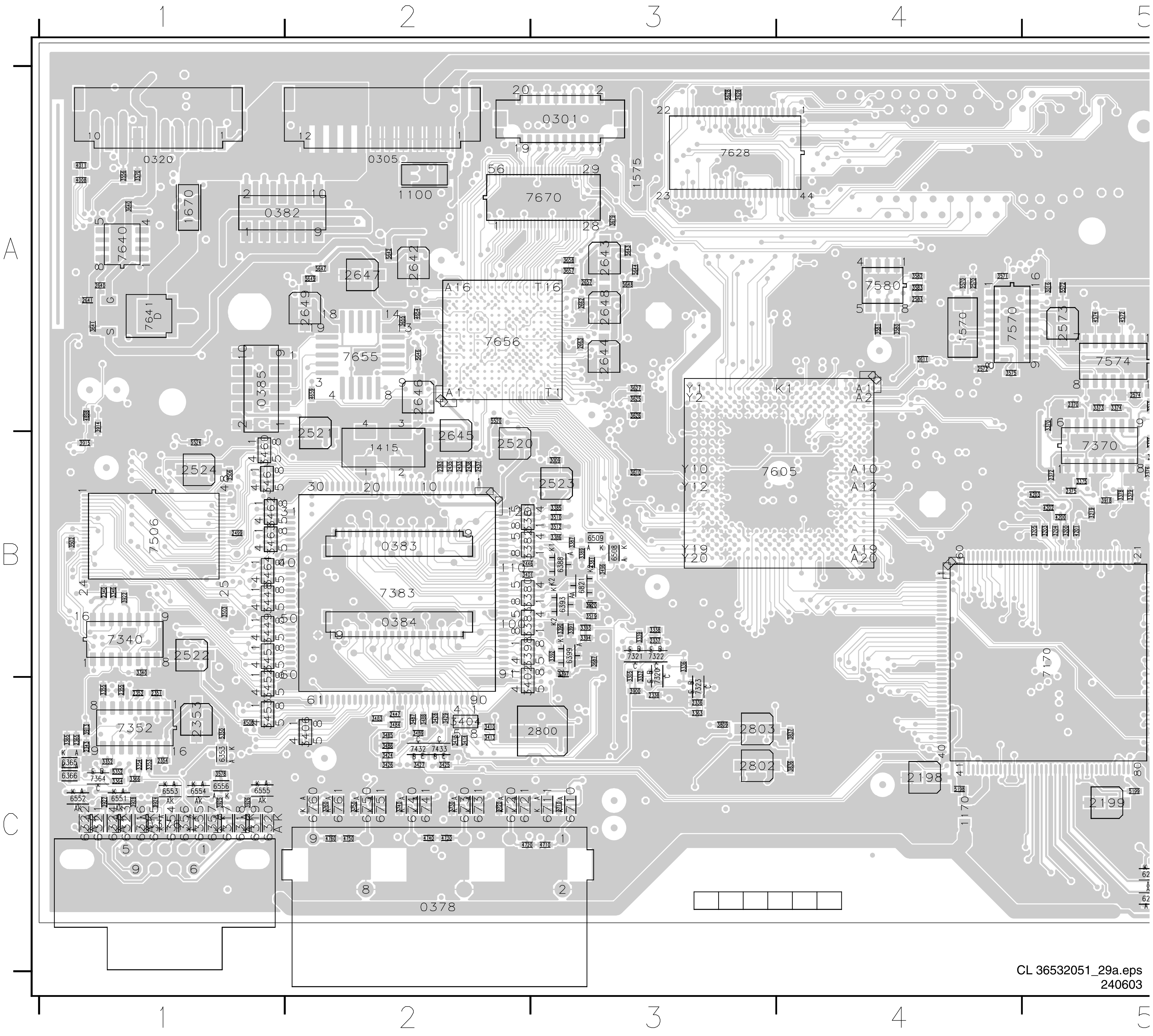
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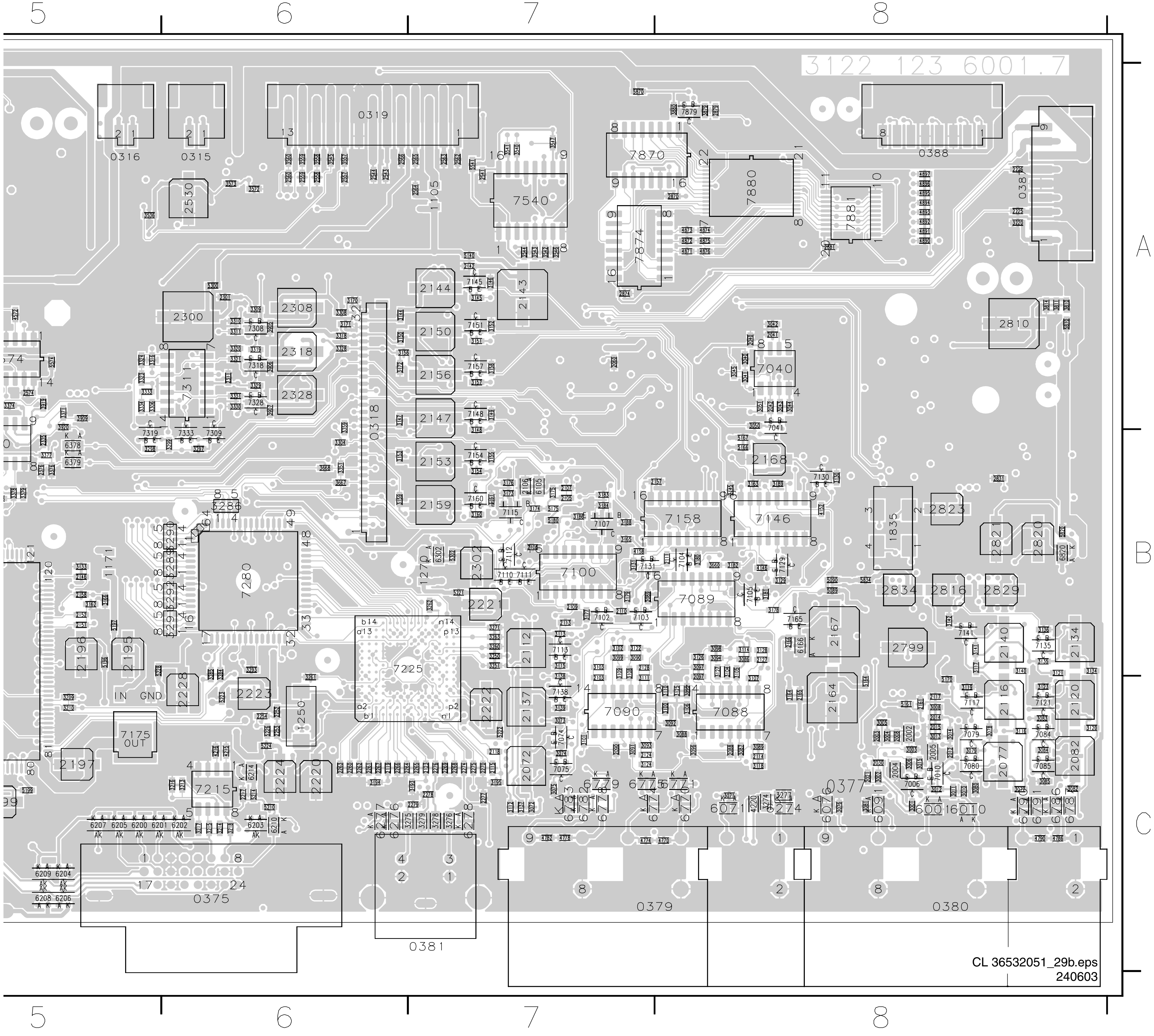
## Layout SCAVIO Panel (Part 2 Top Side)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## Layout SCAVIO Panel (Overview Bottom Side)

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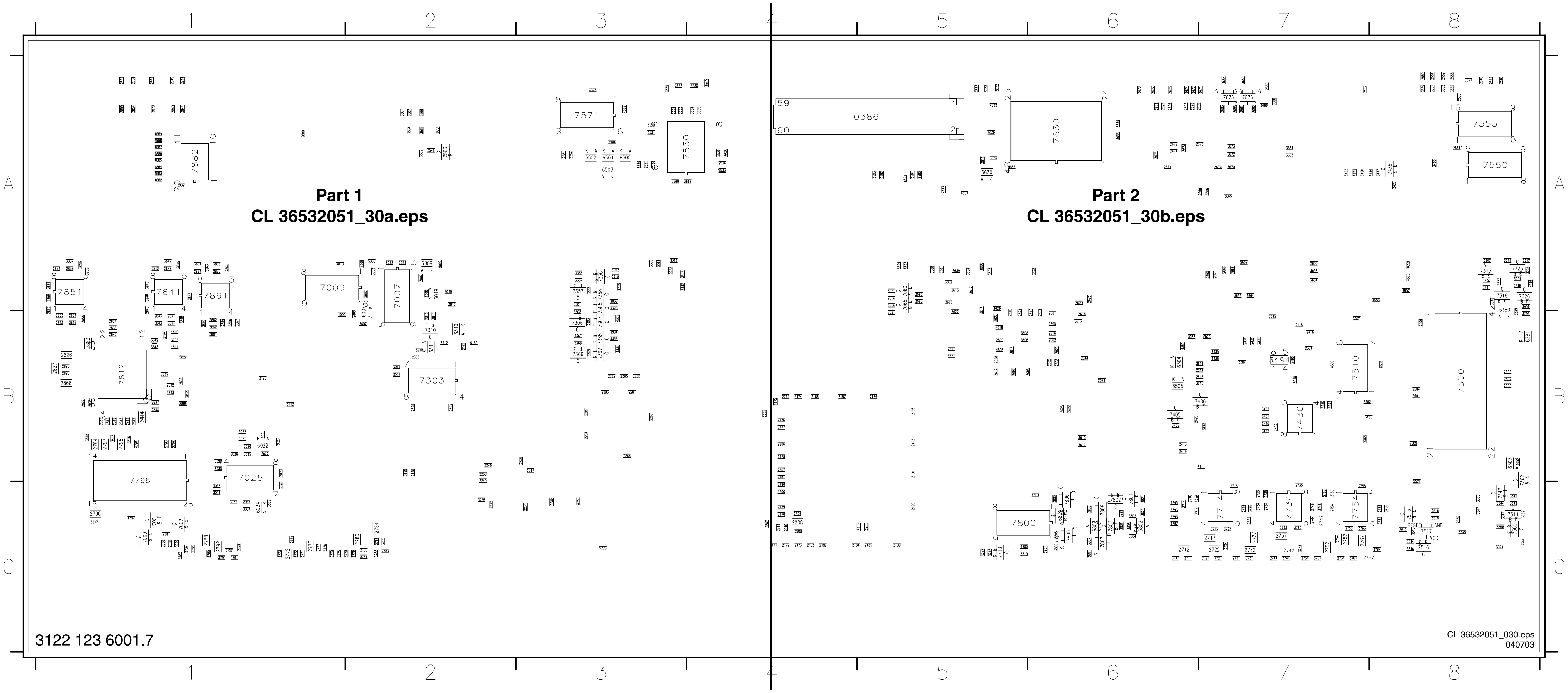

Part 1
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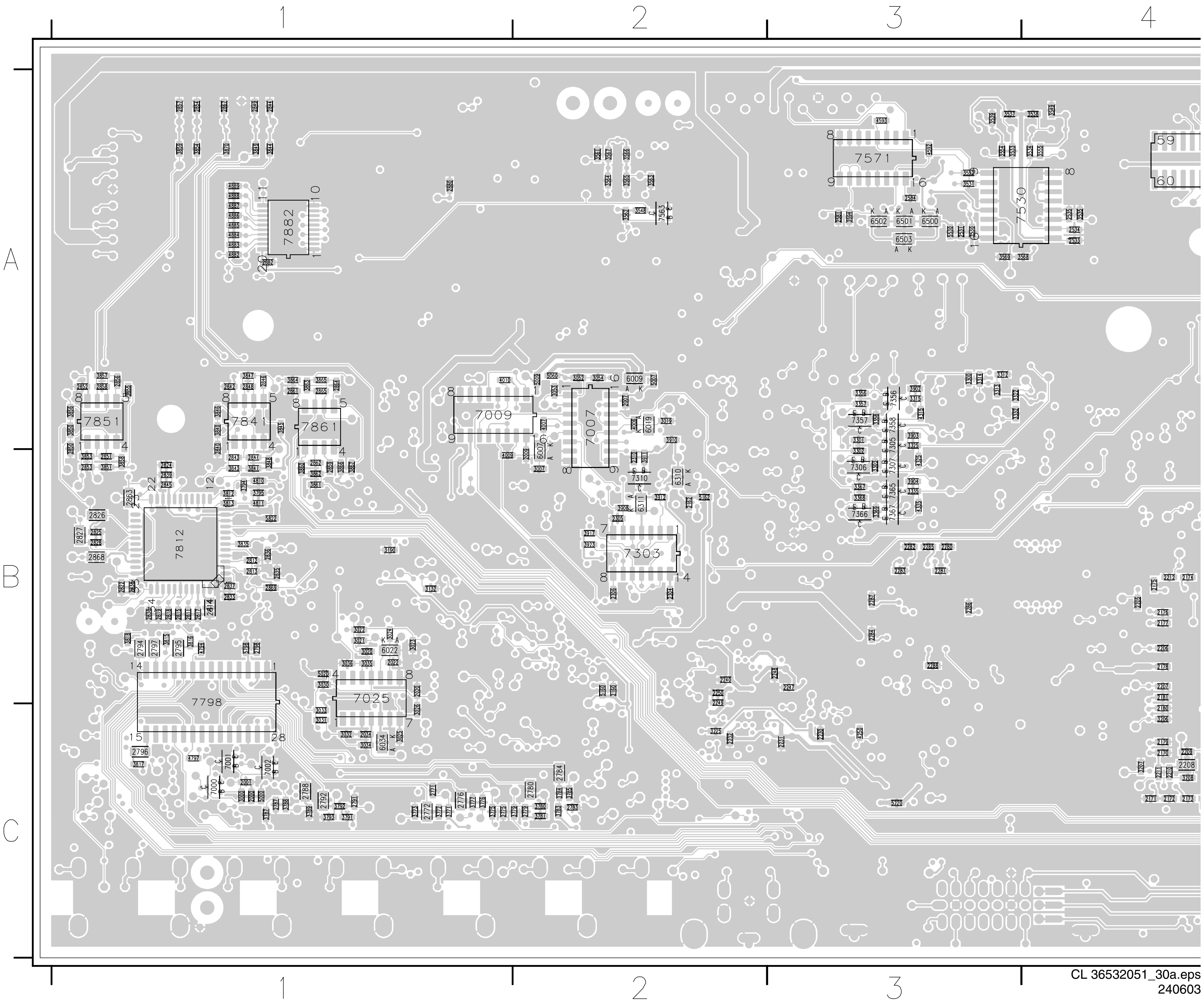
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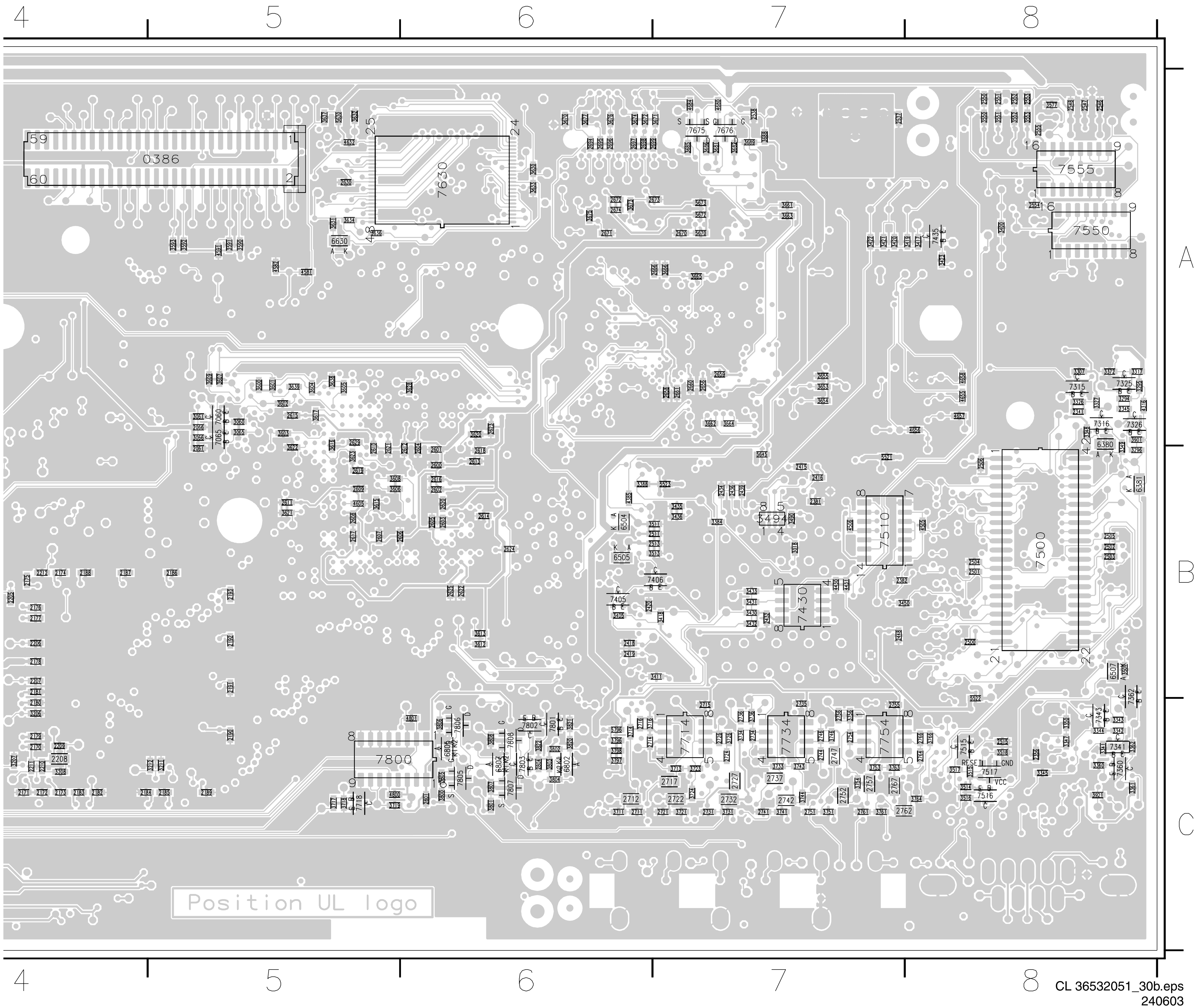
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Position UL logo

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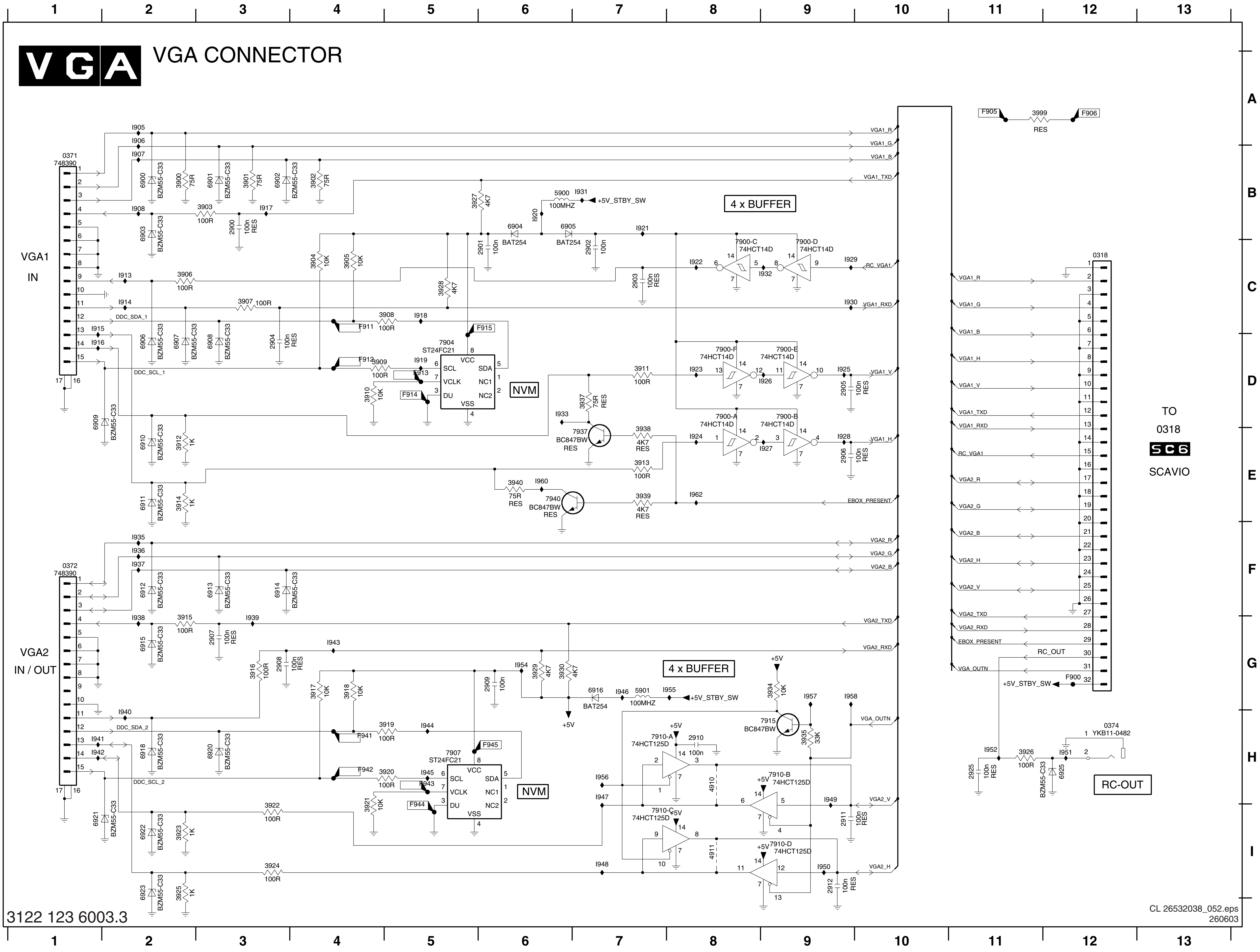
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IN
VGA2
IN / OUT
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748390
0372
748390
4 x BUFFER
NVM
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ST24FC21
7907
ST24FC21
TO
0318
SC6
SCAVIO
RC-OUT
0374
YKB11-0482
0318
VGA1_R
VGA1_G
VGA1_B
VGA1_TXD
VGA1_RXD
VGA1_H
VGA1_V
RC_VGA1
VGA2_R
VGA2_G
VGA2_B
VGA2_H
VGA2_V
VGA2_TXD
VGA2_RXD
EBOX_PRESENT
RC_OUT
VGA_OUTN
+5V_STBY_SW
DDC_SDA_1
DDC_SCL_1
DDC_SDA_2
DDC_SCL_2
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74HCT125D
BC847BW
BAT254
BZM55-C33
100MHZ
+5V

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| 2902 | C7 |
| 2903 | C7 |
| 2904 | D3 |
| 2905 | D9 |
| 2906 | E9 |
| 2907 | G3 |
| 2908 | G3 |
| 2909 | G6 |
| 2910 | H8 |
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| 2925 | H11 |
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| 3902 | B4 |
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| 3904 | C4 |
| 3905 | C4 |
| 3906 | C2 |
| 3907 | C3 |
| 3908 | C5 |
| 3909 | D5 |
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| 3911 | D7 |
| 3912 | E2 |
| 3913 | E7 |
| 3914 | E2 |
| 3915 | G2 |
| 3916 | G3 |
| 3917 | G4 |
| 3918 | G4 |
| 3919 | H5 |
| 3920 | H5 |
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| 3929 | G6 |
| 3930 | G6 |
| 3934 | G9 |
| 3935 | H9 |
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| 3938 | E7 |
| 3939 | E7 |
| 3940 | E6 |
| 3999 | A12 |
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| 4911 | I8 |
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| 6904 | B6 |
| 6905 | B6 |
| 6906 | D2 |
| 6907 | D2 |
| 6908 | D3 |
| 6909 | D1 |
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| 6918 | H2 |
| 6920 | H3 |
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| 6922 | I2 |
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| 6925 | H12 |
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| 7910-B | H9 |
| 7910-C | I7 |
| 7910-D | I9 |
| 7915 | H9 |
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| F913 | D5 |
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| F915 | D5 |
| F941 | H4 |
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| F943 | H5 |
| F944 | I5 |
| F945 | H5 |
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| I938 | G2 |
| I939 | G3 |
| I940 | H2 |
| I941 | H1 |
| I942 | H1 |
| I943 | G4 |
| I944 | H5 |
| I945 | H5 |
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| I947 | H6 |
| I948 | I6 |
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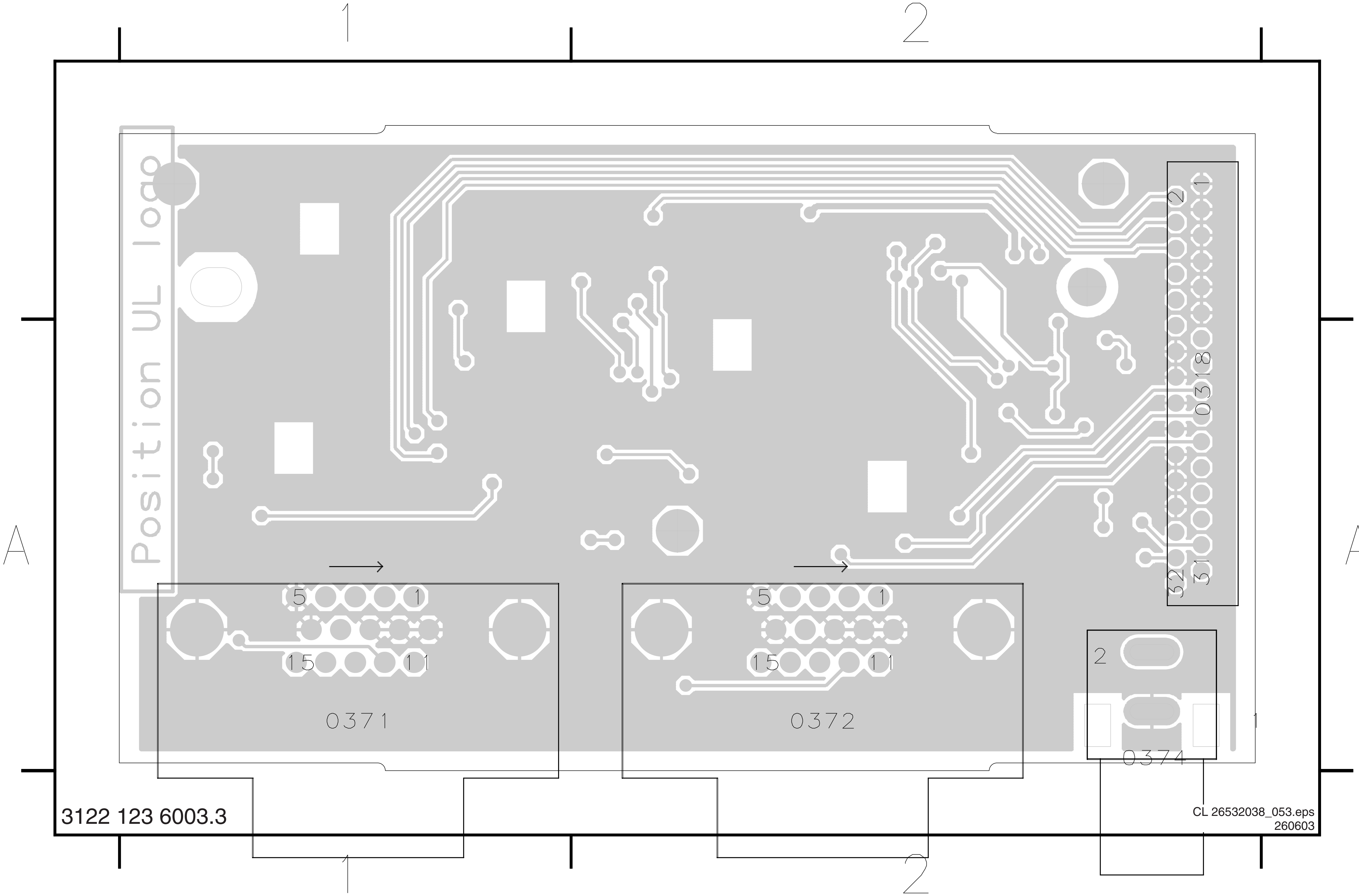
| I960 | E6 |
| I962 | E8 |

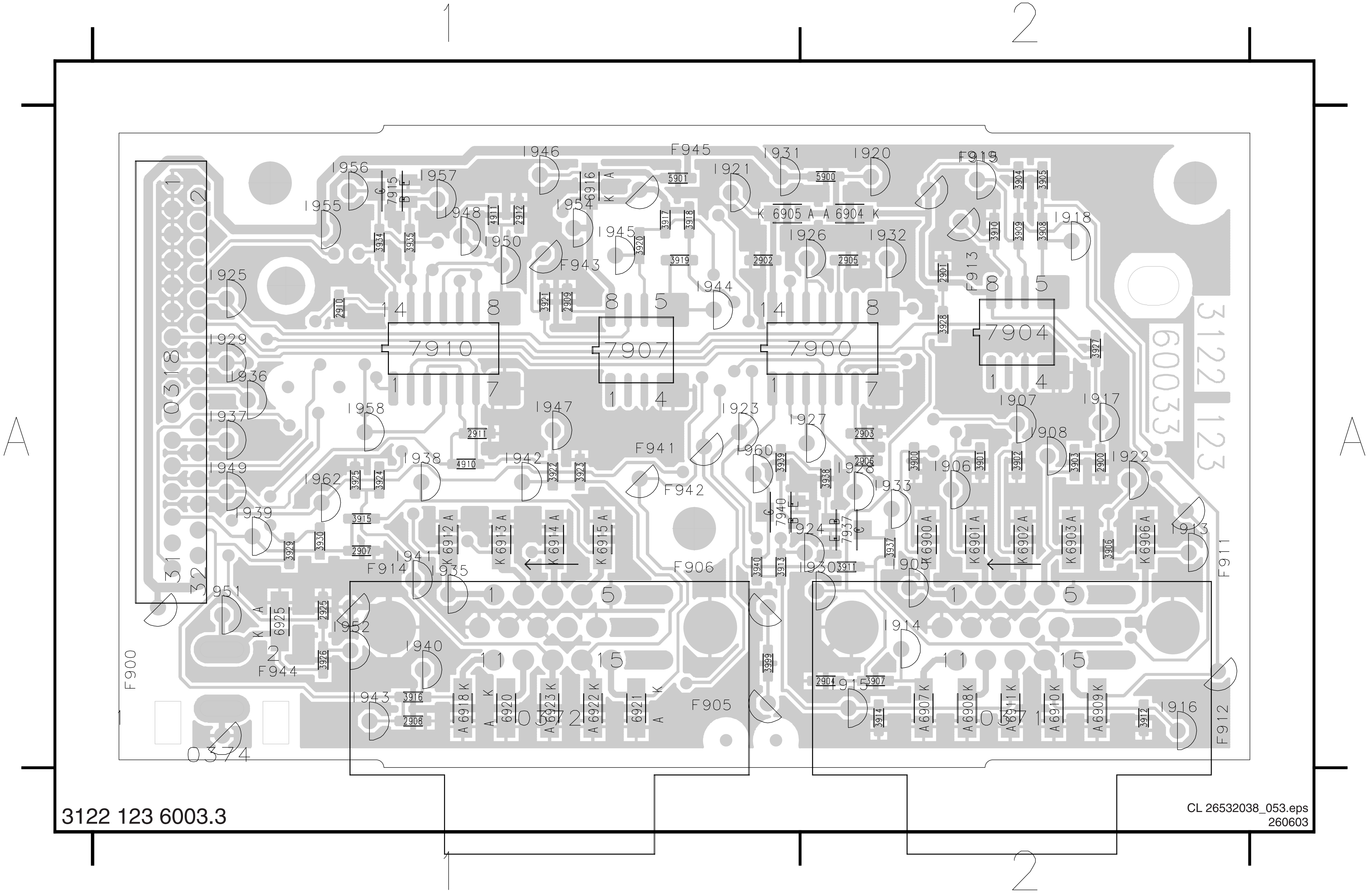
## Layout VGA Connector Panel (Top Side)


1
2
A
A
Position UL logo
0318
1
2
31
32
5
1
15
11
0371
0372
0374
1
2
3122 123 6003.3

| | |
|---|---|
| 0318 | A2 |
| 0371 | A1 |
| 0372 | A2 |
| 0374 | A2 |

CL 26532038_053.eps
260603

## Layout VGA Connector Panel (Bottom Side)


1
2
A
A
1
2
0318
0374
0371
0372
7910
7907
7900
7904
F945
F915
F943
F941
F942
F906
F914
F944
F905
F911
F912
F913
F900
3122 123 6003.3
3122 123 60033
CL 26532038_053.eps
260603

| Item | Location |
|---|---|
| 0318 | A1 |
| 0371 | A2 |
| 0372 | A1 |
| 0374 | A1 |
| 2900 | A2 |
| 2901 | A2 |
| 2902 | A1 |
| 2903 | A2 |
| 2904 | A2 |
| 2905 | A2 |
| 2906 | A2 |
| 2907 | A1 |
| 2908 | A1 |
| 2909 | A1 |
| 2910 | A1 |
| 2911 | A1 |
| 2912 | A1 |
| 2925 | A1 |
| 3900 | A2 |
| 3901 | A2 |
| 3902 | A2 |
| 3903 | A2 |
| 3904 | A2 |
| 3905 | A2 |
| 3906 | A2 |
| 3907 | A2 |
| 3908 | A2 |
| 3909 | A2 |
| 3910 | A2 |
| 3911 | A2 |
| 3912 | A2 |
| 3913 | A1 |
| 3914 | A2 |
| 3915 | A1 |
| 3916 | A1 |
| 3917 | A1 |
| 3918 | A1 |
| 3919 | A1 |
| 3920 | A1 |
| 3921 | A1 |
| 3922 | A1 |
| 3923 | A1 |
| 3924 | A1 |
| 3925 | A1 |
| 3926 | A1 |
| 3927 | A2 |
| 3928 | A2 |
| 3929 | A1 |
| 3930 | A1 |
| 3934 | A1 |
| 3935 | A1 |
| 3937 | A2 |
| 3938 | A2 |
| 3939 | A1 |
| 3940 | A1 |
| 3999 | A1 |
| 4910 | A1 |
| 4911 | A1 |
| 5900 | A2 |
| 5901 | A1 |
| 6900 | A2 |
| 6901 | A2 |
| 6902 | A2 |
| 6903 | A2 |
| 6904 | A2 |
| 6905 | A1 |
| 6906 | A2 |
| 6907 | A2 |
| 6908 | A2 |
| 6909 | A2 |
| 6910 | A2 |
| 6911 | A2 |
| 6912 | A1 |
| 6913 | A1 |
| 6914 | A1 |
| 6915 | A1 |
| 6916 | A1 |
| 6918 | A1 |
| 6920 | A1 |
| 6921 | A1 |
| 6922 | A1 |
| 6923 | A1 |
| 6925 | A1 |
| 7900 | A2 |
| 7904 | A2 |
| 7907 | A1 |
| 7910 | A1 |
| 7915 | A1 |
| 7937 | A2 |
| 7940 | A1 |

# 8. Electrical Alignments

Index of this chapter:

1. General Alignment Conditions
2. Hardware Alignments
3. Software Alignments and Settings

**Note:** The Service Default Mode (SDM) and Service Alignment Mode (SAM) are described in chapter 5. Menu navigation is done with the "CURSOR UP, DOWN, LEFT, OR RIGHT" keys of the remote control transmitter.

## 8.1 General Alignment Conditions

Perform all electrical adjustments under the following conditions:
Mains voltage and frequency: 220 V_ac / 50 Hz unless otherwise stated.
Connect the set to the Mains via an isolation transformer.
Allow the set to warm up for approximately 20 minutes.
Measure the voltages and waveforms in relation to chassis ground (with the exception of the voltages on the primary side of the power supply). Never use the cooling fins/plates as ground.
Test probe: Ri > 10 Mohm, Ci < 2.5 pF.
Use an isolated trimmer/screwdriver to perform the alignments.

Use a VGA-generator (e.g. Astro) or a Personal Computer (*) as test pattern generator (contact your National Service Organisation for the necessary PC test pattern files) and connect it to the VGA1 input of the plasma monitor. When you use a PC, start Microsoft PowerPoint (or Paintbrush), and load the mentioned file. Then display the picture as full screen.

**(*)** If you use a PC as generator, please check (measure) if the video output signals fulfil the VGA standards (see chapter 1).

## 8.2 Hardware Alignments

There are no hardware alignments necessary.

## 8.3 Software Alignments

Enter the Service Alignment Mode (see chapter 5). The SAM menu will now appear on the screen.
Select one of the following alignment menus via the upper horizontal bar:

1. GENERAL (GEN.)
2. DISPLAY (DISP.)
3. SCALER (SCAL.)
4. VIDEO 1 (VID.1)
5. VIDEO 2 (VID.2)
6. OPTIONS (OPT.)

The last three items are not available in the Basic configuration.

**Note:** There are several methods to exit the SAM, each with its own characteristics:

- Switch the set "off" (with the Mains switch or by pulling the Mains cord); new alignment settings are **always** stored, even when item "store" was not activated!
- Switch the set to "standby" by pressing the power button on the remote control transmitter; new alignment settings are **always** stored, even when item "store" was not activated!
- Use a standard RC-transmitter and key in the code **00**; new alignment settings are **not** stored, except when item "store" was activated!

### 8.3.1 GENERAL

**Table 8-1 SAM Menu "GEN."**

| Service Alignment Menu | General (Gen.) |
|---|---|
| Type nr. - AG Code | 32FD9944/01S (example) |
| SW version OTC | AAAABC-X.Y xxxxx |
| SW version PW | AAAABC-X.Y xxxxx |
| SW version EPLD | AAAABC-X.Y xxxxx |
| Errors 1 | xx xx xx xx xx |
| Errors 2 | xx xx xx xx xx |
| Operational hours | xx |
| Reset error buffer | Press OK to reset |
| Store | Press OK to store |

This menu is fully explained in chapter 5.

***STORE***
Select this item, and press OK, to store the alignments.

### 8.3.2 DISPLAY

**Table 8-2 SAM Menu "DISP."**

| Service Alignment Menu | Display (Disp.) |
|---|---|
| Test pattern | On / Off |
| Contrast | Adjust ... |
| Gamma | Adjust ... |
| White point | Adjust ... |
| Compensation fact. | 0 <-------\|-------> 255<br>128 |

***TEST PATTERN***
Possible to generate an "even white" test pattern, which is generated by the PDP. You can use this picture, to check the plasma display for pixel defects.

***CONTRAST***
Not necessary to align, fixed value is "255".

***GAMMA***
Not necessary to align, fixed value is "2".

***WHITE POINT***
Not necessary to align, unless stated by the NSO. Fixed value is "255".

***COMPENSATION FACTOR***
Not necessary to change. Fixed value is "128". In some cases however, a new software table must be loaded in the Pixel Works Scaler (via ComPair). The following service scenarios are possible:

- **When a defective glass filter plate is replaced:** This requires a new "White Point" adjustment (see next paragraph).
- **When a defective PDP is replaced by the same type:** This requires a new "White Point" adjustment (see next paragraph).
- **When a defective PDP is replaced by another (newer) type:** This requires both a new compensation table upload (by ComPair), and a new "White Point" adjustment (see next paragraph). **Note:** The loaded software, performs the settings automatically.
- **When a new software table must be loaded in the Pixel Works Scaler (e.g. in case of a software update):** This requires both a new compensation table upload (by

ComPair), and a new "White Point" adjustment (see next paragraph).
**Note:** The loaded software, performs the settings automatically.

### 8.3.3 SCALER

**Table 8-3 SAM Menu "SCAL."**

| Service Alignment Menu | Scaler (Scal.) |
|---|---|
| Test pattern | On / Off |
| Color temperature | 6500K / 8700K / 10000K |
| White point | Adjust ... |
| Align ADC | Press OK to execute |
| Clear user settings | Press OK to clear |

***TEST PATTERN***

This function makes it possible to generate a "colour bar" test pattern (generated by the PW Scaler IC). You can use this picture, to check the video path, starting at the PW Scaler IC to the plasma display.

***COLOUR TEMPERATURE***

Select the appropriate colour temperature for the alignments (see also "White point" adjustment below).

***WHITE POINT***

**Table 8-4 SAM Menu "SCALER - WHITE POINT"**

| Service Alignment Menu | Scaler - White point |
|---|---|
| White point red | <-------------\|------------> 125 |
| White point green | <---------\|----------------> 100 |
| White point blue | <-----------\|--------------> 110 |
| Press OK when done | |

**Notes:**

- First align the ADC (see ALIGN ADC) **before** aligning the WHITE POINT.
- The alignment values should NOT exceed the value "128".

*Method 1 (with colour analyser)*

Supply, via an external VGA source (e.g. a VGA generator, or a PC in 640x480 mode), a "**White Drive**" test pattern (ask your NSO for the PC file). This picture consists of black picture (0 mV) with in the middle a 100% white (0.7 V) square with dimensions 202x152.

1. Set "Brightness" to "50" and "Contrast" to "71" (via the standard customer menu).
2. Go to the SAM menu.
3. Set COLOR TEMPERATURE to "8700 K" (with the introduction of the high brightness H2 plasma panels, the "NORMAL" colour temperature is adapted from "7600 K" to "8700 K").
4. Measure with a CTV colour analyser (calibrated with the spectra) on the centre of the white square on the screen.
5. Select WHITE POINT in the SAM SCALER menu, and press CURSOR RIGHT.
6. Adjust with the CURSOR UP/DOWN or LEFT/RIGHT command, the three WHITE POINTS RED, GREEN and BLUE to "128" (do **not** go above this value!), and align with one or two of the drivers to the correct coordinates (see table).
7. Repeat the same measurement for respectively colour temperature "6500 K" and "10000 K".
8. Repeat again if necessary.

**Table 8-5 White Point XY-coordinates**

| Colour Temperature | x | y |
|---|---|---|
| 6500 K (Cool) | 313 | 329 |
| 8700 K (Normal) | 289 | 299 |
| 10000 K (Warm) | 280 | 289 |

*Method 2 (without colour analyser)*

Without having a CTV colour analyser, it is possible to directly set some parameters, which are based on average values from production.

**Table 8-6 White point RGB-values 32-inch monitor**

| Col. Temp. 32" | R | G | B |
|---|---|---|---|
| 6500 K (Cool) | 114 | 125 | 128 |
| 8700 K (Normal) | 119 | 128 | 128 |
| 10000 K (Warm) | 125 | 128 | 115 |

**Table 8-7 White point RGB-values 37-inch monitor**

| Col. Temp. 37” | R | G | B |
|---|---|---|---|
| 6500 K (Cool) | 112 | 128 | 127 |
| 8700 K (Normal) | 117 | 128 | 124 |
| 10000 K (Warm) | 119 | 128 | 111 |

**Table 8-8 White point RGB-values 42-inch monitor**

| Col. Temp. 42" | R | G | B |
|---|---|---|---|
| 6500 K (Cool) | 116 | 126 | 128 |
| 8700 K (Normal) | 119 | 128 | 125 |
| 10000 K (Warm) | 127 | 127 | 112 |

***ALIGN ADC***

Supply, via an external VGA source (e.g. a PC, mode 640x480), the "**ADC alignment**" test pattern (ask your NSO for the PC file).
The upper 360 lines of this picture consists of a half black and half white picture with the following settings (on a full scale of "255"):

- Black "17" (47 mV).
- White "255" (700 mV).

The lower 120 lines of this picture, are vertically divided into 4 boxes of 160 pixels each with (from left to right) the following settings:

- Black "0" (0 mV).
- Black "5" (14 mV).
- White "250" (686 mV).
- White "255" (700 mV).

1. Go to the SAM menu.
2. Select ALIGN ADC in the SAM Scaler menu, and press CURSOR RIGHT.
3. The alignment is performed automatically.

***CLEAR USER SETTINGS***

In some (rare) cases it is possible that the PW Scaler recalls settings, which are made earlier by the user (e.g. "phase" or "shift"), and not the last (wanted) settings. To correct this problem, one can select this function.

### 8.3.4 VIDEO 1 (Enhanced version only)

**Table 8-9 SAM Menu "VID. 1"**

| Service Alignment Menu | Video 1 (Vid. 1) |
|---|---|
| Test pattern | On / Off |
| | |
| Brightness | 0 <-----------\|---------- > 255 |
| Contrast | 0 <-----------\|---------- > 255 |
| Sharpness | 0 <-----------\|---------- > 255 |

***TEST PATTERN***

This function makes it possible to generate a "full white" test pattern (generated by the de-interlacer SDA9400, item 7280). You can use this picture, to check the video path of the external inputs AV1, AV2, and AV3, starting at item 7280 (**mind you:** the proper functioning of the Digital Video Decoder SAA7118 is not tested!).

**Note:** To generate the test pattern, it is necessary to feed a signal to one of the AV-inputs.

***BRIGHTNESS***

This is the setting of IC7225 (SAA7118). Not necessary to align, fixed value is:

- "132" for PAL/SECAM.
- "139" for NTSC.

***CONTRAST***

This is the setting of IC7225 (SAA7118). Not necessary to align, fixed value is:

- "139" for PAL/SECAM.
- "128" for NTSC.

***SHARPNESS***

Not necessary to align, fixed value is "6".

### 8.3.5 VIDEO 2 (Enhanced version only)

**Table 8-10 SAM Menu "VID. 2"**

| Service Alignment Menu | Video 2 (Vid. 2) |
|---|---|
| Lum. delay PAL | 0 <-----------\|---------- > 7 |
| Lum. delay SECAM | 0 <-----------\|---------- > 7 |
| Lum. delay NTSC | 0 <-----------\|---------- > 7 |

With these alignments, you can place the luminance information on the chrominance information (push brightness onto the colour). Use a colour bar/grey scale pattern as test signal. These values are normally fixed.

***LUM. DELAY PAL***

Apply a PAL colour bar/grey scale pattern as a test signal. Adjust value until the transients of the colour part and black and white part of the test pattern are at the same position. Fixed value is "4".

***LUM. DELAY SECAM***

Apply a SECAM colour bar/grey scale pattern as a test signal. Adjust value until the transients of the colour part and black and white part of the test pattern are at the same position. Fixed value is "4".

***LUM. DELAY NTSC***

Apply a NTSC colour bar/grey scale pattern as a test signal. Adjust value until the transients of the colour and black & white part of the test area are at the same position. Fixed value is "4".

### 8.3.6 OPTIONS (Enhanced version only)

**Table 8-11 SAM Menu "OPT."**

| Service Alignment Menu | Options (Opt.) |
|---|---|
| Vs/Va control | On / Off |
| Display size | 32" / 42" |
| Virgin | On / Off |
| ICONN control | On / Off |
| FAN control | On / Off |

***Vs/Va CONTROL***

When this option is set to "on", it will enable the "PDP feedback loop" for the **automatic** V_s and V_a alignment. See table below for the correct setting.

**Table 8-12 V_s/V_a Control options**

| | PSU version 3 | PSU v.3 with precision R's | PSU version 4 |
|---|---|---|---|
| **PDP with Vs feedback (-52 PDP)** | Feedback loop 'OFF', alignment is necessary. | Feedback loop 'ON', but alignment (check) is necessary (see par. 8.2 for values) . | Feedback loop 'ON', no alignment necessary. |
| **PDP with Vs/Va feedback (with 'B' in serial number)** | Feedback loop 'OFF', alignment is necessary. | Feedback loop 'ON', no alignment (check) necessary. | Feedback loop 'ON', no alignment necessary. |

***DISPLAY SIZE***

This option is only meant for the factory, to indicate the display size for the software.

**Note:** When none of the items is highlighted, the 37-inch display is selected.

***VIRGIN***

Normally "off". When this option is set to "on", the display starts with the language selection menu.

***ICONN CONTROL***

Normally "off". Set this option to "on" in case a so-called "ICONN"-box (for Hotel TV) is connected to the display.

**Caution:** When this option is set to "on", **without an ICONN-Box** connected to the monitor, one cannot control the monitor anymore (because the RC connection is interrupted).

There are two ways to restore the remote control again:

Connect pin 8 (IR_TX) to pin 9 (IR_RX) on the RS232 connector of the monitor (the easiest way to do this, is to make a "dummy" connector with these pins connected, and plug this into the monitor), or

Set the set in the Service Alignment Mode (SAM) via **shorting jumpers 1 and 2 of connector 0382** on the SCAVIO panel. After this, you can enter the appropriate menu to set ICONN CONTROL to "off" again.

***FAN CONTROL***

Normally "off". Set this option to "on", when the optional fans are mounted (ask your NSO for info).

# 9. Circuit Descriptions, List of Abbreviations, and IC Data Sheets

Index of this chapter:

1. Introduction
2. Power Supply Unit
3. VGA connector Panel
4. SCAVIO Panel
5. Audio Amplifier Panel
6. LED/Switch Panel
7. Plasma Display Panel
8. Abbreviations
9. IC Data Sheets

**Notes:**

- Figures can deviate slightly from the actual situation, due to different set executions.
- For a good understanding of the following circuit descriptions, please use the diagrams in chapter 6 and 7. Where necessary, you will find a separate drawing for clarification.

## 9.1 Introduction

The FM-chassis is the 3rd generation Philips plasma monitors. In comparison to the FTV1.9DE, it has:

- A power supply that is based on the MG-chassis,
- A new SCAVIO panel, which takes over the tasks of the former AVC and LIMESCO panels.
- A new, class-D, audio amplifier,
- A new, improved, Plasma Display Panel (with new ALiS technology).

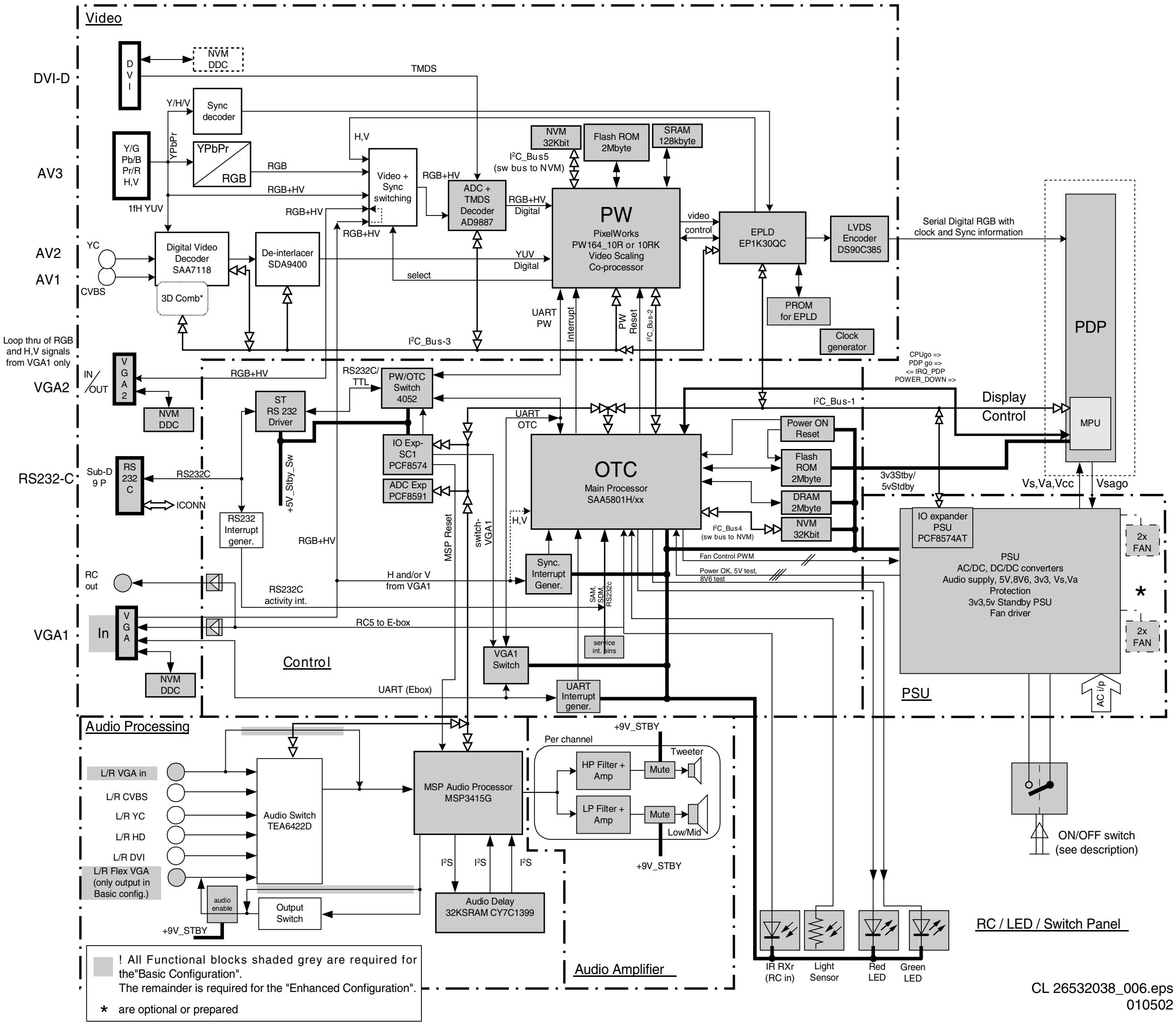
It is possible to use this product as stand-alone monitor or, in combination with the so-called F21RE Receiver box, for TV applications.

In this manual, we combined three screen sizes (32-inch as FM23, 37-inch as FM33, and 42-inch as FM24) into one manual. When there are important differences between these versions, this is explicitly mentioned.

For these chassis, there are two configurations:

- **Basic:** which has one video input (VGA1) and one video output (VGA2). The VGA2 video output is directly connected to the VGA1 video input, without any processing. The audio output of VGA2 is also directly connected to the VGA1 audio input.
- **Enhanced:** which has six video inputs (VGA1, VGA2, DVI-D, CVBS, YC and HD) and six corresponding audio inputs. These inputs are internally converted to the appropriate signals. The VGA2 connection is here bi-directional (Flex-VGA).

**Note:** In all descriptions below, the *Enhanced* version of this FM-chassis is discussed. When there are important differences between the *Basic* and *Enhanced* versions, this is mentioned.


Video
DVI-D
DVI
NVM DDC
TMDS
Y/H/V
Sync decoder
AV3
Y/G Pb/B Pr/R H,V
YPbPr
YPbPr RGB
RGB
RGB+HV
1fH YUV
H,V
Video + Sync switching
RGB+HV
ADC + TMDS Decoder AD9887
RGB+HV Digital
NVM 32Kbit
Flash ROM 2Mbyte
SRAM 128kbyte
I²C_Bus5 (sw bus to NVM)
PW
PixelWorks PW164_10R or 10RK Video Scaling Co-processor
video control
EPLD EP1K30QC
LVDS Encoder DS90C385
Serial Digital RGB with clock and Sync information
AV2
AV1
YC
CVBS
Digital Video Decoder SAA7118
De-interlacer SDA9400
3D Comb*
select
YUV Digital
UART PW
Interrupt
PW Reset
I²C_Bus-2
PROM for EPLD
Clock generator
I²C_Bus-3
Loop thru of RGB and H,V signals from VGA1 only
VGA2
IN/OUT
VGA2
NVM DDC
RGB+HV
ST RS 232 Driver
RS232C/TTL
PW/OTC Switch 4052
UART OTC
CPUgo => PDP go => <= IRQ_PDP POWER_DOWN =>
I²C_Bus-1
Display Control
PDP
MPU
RS232-C
Sub-D 9 P
RS 232 C
RS232C
ICONN
+5V_Stby_Sw
IO Exp-SC1 PCF8574
ADC Exp PCF8591
OTC
Main Processor SAA5801H/xx
Power ON Reset
Flash ROM 2Mbyte
DRAM 2Mbyte
NVM 32Kbit
I²C_Bus4 (sw bus to NVM)
3v3Stby/ 5vStdby
Vs,Va,Vcc
Vsago
RS232 Interrupt gener.
RGB+HV
MSP Reset
switch-VGA1
H,V
Sync. Interrupt Gener.
Fan Control PWM
Power OK, 5V test, 8V6 test
IO expander PSU PCF8574AT
2x FAN
PSU AC/DC, DC/DC converters Audio supply, 5V,8V6, 3v3, Vs,Va Protection 3v3,5v Standby PSU Fan driver
*
2x FAN
RC out
H and/or V from VGA1
RS232C activity int.
SAM SDM RS232c
VGA1
In
VGA
RC5 to E-box
service int. pins
VGA1 Switch
NVM DDC
Control
UART (Ebox)
UART Interrupt gener.
PSU
AC i/p
Audio Processing
+9V_STBY
Per channel
L/R VGA in
L/R CVBS
L/R YC
L/R HD
L/R DVI
L/R Flex VGA (only output in Basic config.)
Audio Switch TEA6422D
MSP Audio Processor MSP3415G
HP Filter + Amp
Mute
Tweeter
LP Filter + Amp
Mute
Low/Mid
I²S
I²S
I²S
+9V_STBY
Audio Delay 32KSRAM CY7C1399
audio enable
Output Switch
+9V_STBY
ON/OFF switch (see description)
RC / LED / Switch Panel
Audio Amplifier
IR RXr (RC in)
Light Sensor
Red LED
Green LED
! All Functional blocks shaded grey are required for the"Basic Configuration".
The remainder is required for the "Enhanced Configuration".
* are optional or prepared
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010502

Figure 9-1 Control and Data Path

### 9.1.1 Input/Output

The main inputs are:

- **Basic:** VGA only,
- **Enhanced:** VGA, Flex-VGA, DVI-D, HD-RGB+HV, HD-2fH-YPbPr (sync on Y), 1fH-YCbCr (sync on Y), YC, CVBS on cinch. Flex-VGA gives the user a choice to configure the "loop-through VGA output" as an output or as input.

### 9.1.2 Video

This mainly consists of an analogue processing part and a digital processing part. The video inputs like VGA (*Basic* configuration), CVBS, YC, HD-RGB/YUV (1fH and 2fH) and DVI-D are received and processed.
The VGA signals are first converted to digital signals and then processed by the PW Scaler.

The YPbPr (2fH) signal is discretely converted to RGB, whereas the YCbCr (1fH) signal is processed in the SAA7118 Digital Video decoder.

The base-band video inputs (CVBS and YC) are output from this decoder as digital YUV, which are then further processed by the Pixel Works Scaler (PW).

The signals on the digital DVI input are first decoded by the TMDS decoder inside the AD9887 and then processed by the PW Scaler.

The PW Scaler output is going through an EPLD and then via an LVDS Encoder to the Fujitsu/Hitachi PDP (Plasma Display Panel) as differential serial data. This PDP is based on ALiS (Alternate Lighting of Surface) technology and is an interlaced display, with separate odd and even fields to be displayed.

### 9.1.3 Audio

This mainly hosts the audio inputs for the various video inputs. They go through an I2C controlled source selector. The main audio processing is done by the Micronas MSP3415G version with built-in Ultra Bass-II algorithm.

A digital delay line is created using the I2S channel and SRAM. The delay created can be selected between two values, one for the Receiver box, and one for the Monitor.

The processed audio signals are then differentially transmitted to the audio amplifier panel. This amplifier drives a tweeter and a twin-drive woofer (low/mid range). Active filtering is done before the amplifiers.

### 9.1.4 Control

The main controller is the OTC, referred to as the "main processor". This operates in co-ordination with the processor in the Pixel Works Scaler (PW), referred to as the "co-processor".

When the plasma monitor is connected to an F21RE Receiver box, the UART commands from the Receiver box will control the monitor.
In stand-alone mode, the monitor can be controlled via the Remote Control or via the RS232C port.

DDC1/2B (Digital Data Channel, an I2C-based protocol) is implemented with separate identification NVMs for the two VGA inputs and the DVI-D input as well. In addition, the RS232C port can be used for software download to the PW and the OTC. The target for downloading is controlled via a switch in the RS232C path; the switch itself is controlled by the OTC.

### 9.1.5 Power Supply

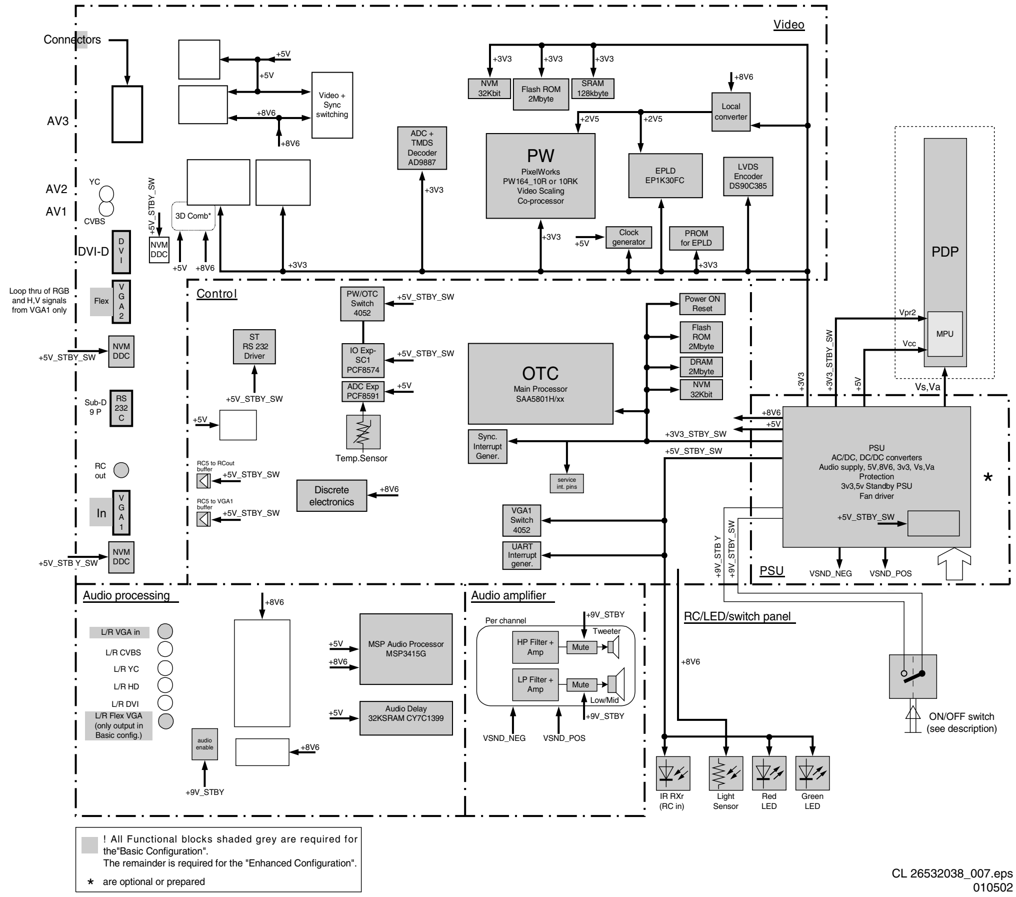
Video
Connectors
AV3
AV2
AV1
YC
CVBS
DVI-D
D V I
+5V_STBY_SW
NVM DDC
3D Comb*
+5V
+8V6
Video + Sync switching
ADC + TMDS Decoder AD9887
+3V3
NVM 32Kbit
Flash ROM 2Mbyte
SRAM 128kbyte
PW
PixelWorks PW164_10R or 10RK Video Scaling Co-processor
+2V5
EPLD EP1K30FC
LVDS Encoder DS90C385
Local converter
Clock generator
PROM for EPLD
Loop thru of RGB and H,V signals from VGA1 only
Flex
V G A 2
NVM DDC
Sub-D 9 P
RS 232 C
RC out
In
V G A 1
+5V_STB Y_SW
Control
ST RS 232 Driver
PW/OTC Switch 4052
IO Exp-SC1 PCF8574
ADC Exp PCF8591
Temp.Sensor
OTC
Main Processor SAA5801H/xx
Power ON Reset
Flash ROM 2Mbyte
DRAM 2Mbyte
NVM 32Kbit
Sync. Interrupt Gener.
service int. pins
RC5 to RCout buffer
RC5 to VGA1 buffer
Discrete electronics
VGA1 Switch 4052
UART Interrupt gener.
+3V3_STBY_SW
PDP
Vpr2
Vcc
MPU
Vs,Va
+3V3
+3V3_STBY_SW
PSU
AC/DC, DC/DC converters
Audio supply, 5V,8V6, 3v3, Vs,Va
Protection
3v3,5v Standby PSU
Fan driver
*
+9V_STB Y
+9V_STBY_SW
PSU
VSND_NEG
VSND_POS
Audio processing
L/R VGA in
L/R CVBS
L/R YC
L/R HD
L/R DVI
L/R Flex VGA (only output in Basic config.)
audio enable
+9V_STBY
MSP Audio Processor MSP3415G
Audio Delay 32KSRAM CY7C1399
Audio amplifier
Per channel
HP Filter + Amp
LP Filter + Amp
Mute
Tweeter
Low/Mid
+9V_STBY
VSND_NEG
VSND_POS
RC/LED/switch panel
IR RXr (RC in)
Light Sensor
Red LED
Green LED
ON/OFF switch (see description)
! All Functional blocks shaded grey are required for the"Basic Configuration".
The remainder is required for the "Enhanced Configuration".
* are optional or prepared

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Figure 9-2 Power Supply Path

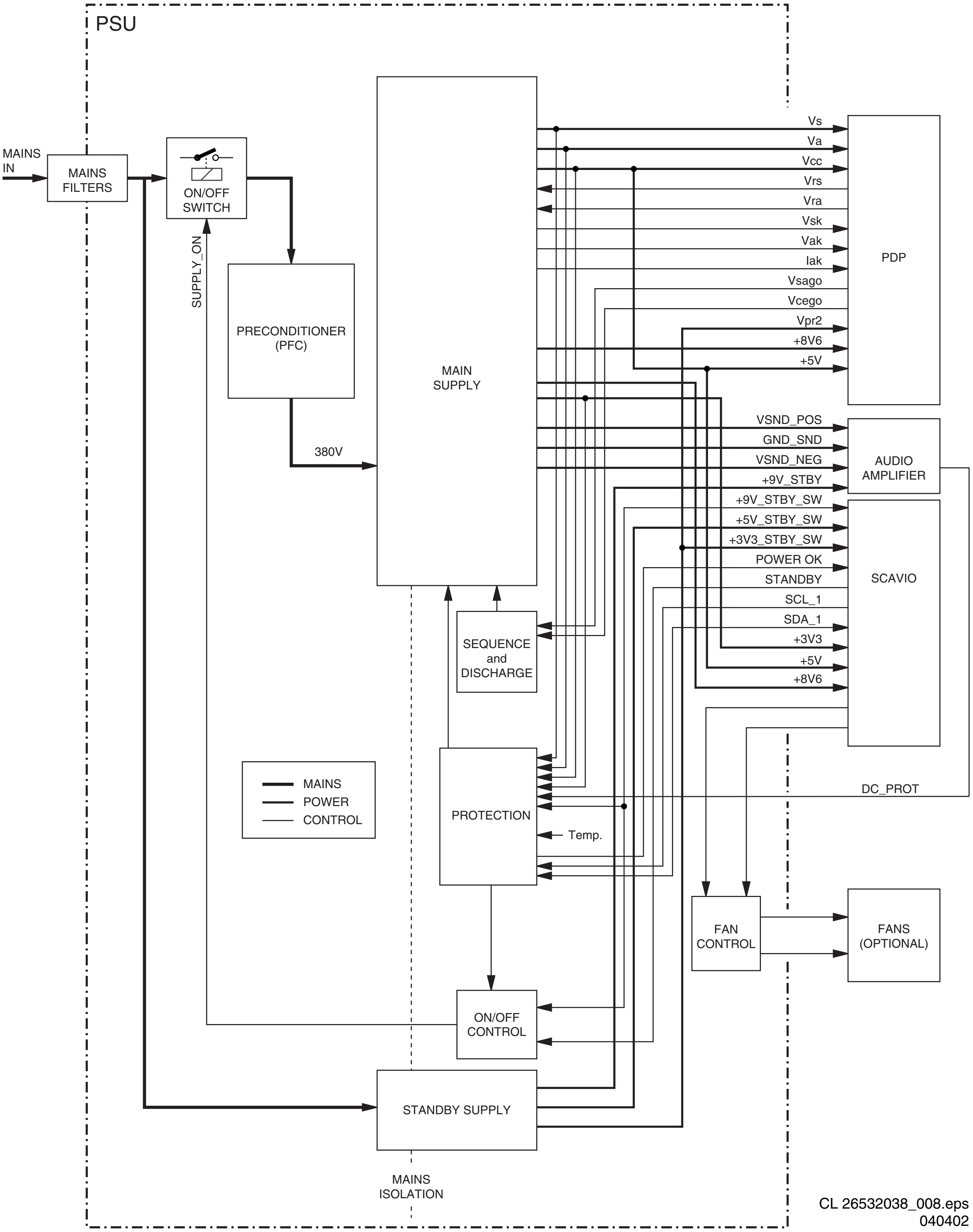
The PSU consists of a pre-conditioner part and a DC/DC converter part. This converter supplies power to the PDP high voltages, the auxiliary voltages, and the audio amplifier. There is a separate standby power supply, which supplies the Main Processor, PDP microcontroller, interrupt generator and some other circuits.

The mains inlet module will host the inlet and filtering.

There is a functional "Mains on/off" switch on the LED panel. This switch is on the secondary side, controlling the relays on the primary side.

## 9.2 Power Supply Unit (Diagrams P)

### 9.2.1 Introduction


PSU
MAINS IN
MAINS FILTERS
ON/OFF SWITCH
SUPPLY_ON
PRECONDITIONER (PFC)
380V
MAIN SUPPLY
SEQUENCE and DISCHARGE
PROTECTION
Temp.
ON/OFF CONTROL
STANDBY SUPPLY
MAINS ISOLATION
MAINS
POWER
CONTROL
Vs
Va
Vcc
Vrs
Vra
Vsk
Vak
Iak
Vsago
Vcego
Vpr2
+8V6
+5V
PDP
VSND_POS
GND_SND
VSND_NEG
AUDIO AMPLIFIER
+9V_STBY
+9V_STBY_SW
+5V_STBY_SW
+3V3_STBY_SW
POWER OK
STANDBY
SCL_1
SDA_1
+3V3
+5V
+8V6
SCAVIO
DC_PROT
FAN CONTROL
FANS (OPTIONAL)
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040402

Figure 9-3 Power Supply

**Table 9-1 I/O Overview Power Supply**

| Name | I/O | Value | Description |
|---|---|---|---|
| +3V3 | Out | +3.3 V_dc | To supply small signal digital circuitry. |
| +3V3_STBY_SW | Out | +3.3 V_dc | To supply small signal digital circuitry, needing power in standby |
| +5V | Out | +5 V_dc | To supply small signal digital circuitry. |
| +5V_STBY_SW | Out | +5 V_dc | To supply small signal digital circuitry, needing power in standby |
| +8V6 | Out | +8.6 V_dc | To supply the small signal analogue circuitry. |
| +9V_STBY | Out | +9 V_dc | Signal to functional ON/OFF switch. |
| +9V_STBY_SW | Out | +9 V_dc | Signal from functional ON/OFF switch. |
| DC_PROT | In | H/L | Signal from audio amplifier to switch OFF the power supply in case of a safety problem. |
| FAN_SP_1 | In | H/L (TTL level) | PWM signal from uP to control optional fans (group 1). |
| FAN_SP_2 | In | H/L (TTL level) | PWM signal from uP to control optional fans (group 2). Not for FM33. |
| FAN_SUPPLY_1 | Out | 5 to 13 V_dc | Supply voltage for optional fans (group 1). |
| FAN_SUPPLY_2 | Out | 5 to 13 V_dc | Supply voltage for optional fans (group 2). Not for FM33. |
| I_ak | Out | | Signal to measure 'I_a' in PDP (I_ak= 1 x I_a). |
| Mains | In | 110/240 V_ac, 50/60 Hz | Mains voltage. |
| POWER_OK | Out | H/L (TTL level) | Signal to an interrupt pin of the uP, which indicates that the power supply is in regulation. If an error occurs, signal goes from H to L. |
| SCL_1 | In | H/L | I2C clock line from uP. |
| SDA_1 | In/ Out | H/L | Bi-directional I2C data line from/to uP. |
| STANDBY | In | H/L (TTL level) | Signal to switch the PSU to standby mode. |
| V_a | Out | +30 to +70 V_dc | To supply the addressing circuitry in the PDP. |
| V_ak | Out | | Signal to measure Va in PDP (V_sk= 0.036 x V_a). |
| V_cc | Out | +5 V_dc | To supply small signal digital circuitry in the PDP. |
| V_cego | In | H/L (H= +2 V_dc) | Signal to switch the low voltage supplies ON/OFF. |
| V_ra | In | | Signal to control Va (V_a= 30 + (20 x V_ra)). |
| V_rs | In | | Signal to control Vs (V_s= 70 + (10 x V_rs)). |
| V_s | Out | +70 to +90 V_dc | To supply the sustain circuitry in the PDP. |
| V_sago | In | H/L (H= +2 V_dc) | Signal to switch the high voltage supplies (V_s and V_a) ON/OFF. |
| V_sk | Out | | Signal to measure V_s in PDP (V_sk= 0.029 x V_s). |
| V_SND_POS | Out | +14.5 V_dc | To supply the audio amplifier panel. |
| V_SND_NEG | Out | -14.5 V_dc | To supply the audio amplifier panel. |

The Power Supply Unit (PSU) is designed to provide regulated output voltages for the plasma display panel (PDP) and the built-in electronic panels (such as e.g. the SCAVIO and Audio Amplifier panels).
It houses the Pre-conditioner, DC/DC converters and the Standby circuitry. In addition, this panel will house the protection and the (optional) fan drive circuitry.
The mains inlet is mounted alongside the SCAVIO panel. It consists of the necessary high and low frequency mains filters.

The mains AC voltage is applied to the input filter and then fed to the standby supply. This supply is always operational and delivers the +9V_STBY voltage.
The task of the main supply is to deliver the supply voltages for the several electrical circuits in the plasma monitor.
It is switched via two single-pole relays, which are powered from the +9V_STBY voltage and controlled via the SUPPLY_ON signal.
The reason to choose for a separate standby supply instead of a single flyback supply is the requirement to have a low standby power consumption.

The PSU consists of the following parts (which are described separately):

- Mains inlet and filter.
- Standby supply.
- Fan control (optional).
- Pre-conditioner.
- LLC supply.
- Aux. supply.
- Protections.

**Notes:**

- To understand the descriptions below, see also the diagrams in Chapter 7.
- The descriptions are valid for the whole FM-range (FM23, FM24, and FM33). Where there are deviations, this will be highlighted per chassis.

### 9.2.2 Mains Inlet and Filter (Diagram P2)

***Introduction***

The mains filter provides common-mode and differential-mode filtering, to fulfil legal and self-imposed limits. Additional provisions are mains spikes and lightning protection.

***Operation***

The mains voltage is provided via mains inlet 0308, after which it is fused by a T6.3A fuse (item 1400).
The next part, the mains filter, is **optional**. It consists of an LC common mode filter section. This filter consists of two capacitors (items 2402 and 2403) from both phase and neutral to ground (to reduce the leakage current) and an inductor (5401). Interferences on one of the phases are shorted to ground via these capacitors.
Inductor 5401 also provides a differential-mode filtering with capacitor 2400. Resistor 3401 discharges this capacitor after the mains is disconnected.
A second common mode filter is made around coil 5402 and capacitor 2401. A third filter is made around coil 5404 and capacitor 2412 (*only for the FM24 and FM33*).

Resistor 3400 is a high energy VDR. The advantage of this VDR is that it can handle 400 V_ac without risk of fire. At high voltage peaks (e.g. lightning surge) on one of the phases, the

resistance of VDR 3400 will be very low, causing fuse 1400 to interrupt.
At a lightning surge on both phases with respect to chassis ground, mains filter 5401 will form a high resistance, through which the voltage will rise very sharply.
To prevent flashovers, a spark-gap/ resistor combination (items 1402 and 3404) is implemented.

### 9.2.3 Standby Supply (Diagram P2)

***Introduction***
The standby supply is a separate power supply, meant to reduce power consumption of the plasma monitor in standby mode. The standby supply operates on the AC voltage from the input filter part, and has to deliver a stable 9 V voltage.

It has three "mains isolated" outputs, and one "hot" output:
- +9V_STBY (called +9V_STBY_SW after the "on/off" switch 1101), to power the "on/off" relays in the pre-conditioner.
- +5V_STBY_SW (derived from the +9V_STBY via voltage regulator 7540)
- +3V3_STBY_SW, to supply the microprocessor of the PDP.
- 25V_HOT, to supply the LLC controller.

The standby supply is also connected to the pre-conditioner output (400V_HOT), in order to deliver a voltage as long as possible, after switch "off" and at mains dips.

***Operation***
The standby supply is always operational when the AC input voltage is present, so even when the POWER switch is in the "off" position. After a small rectifier (D6512/6513) and buffer capacitor (C2503), the generated DC voltage is applied to an SMPS (Switched Mode Power Supply).

The SMPS itself is build around IC7500, a "TINYSwitch" TNY256. This IC contains a control circuitry and a power MOSFET. It uses a simple "on/off" control loop to regulate the output voltage. The generated +9V_STBY voltage at the secondary side is rectified by D6504 and smoothed by C2508. The supply for the TNY256 (pin 5) comes via resistor R3506 and L5500.

By using secondary sensing, a very accurate standby voltage and high efficiency is achieved. The sensing circuit uses a TL431 as reference voltage/error amplifier. Optocoupler 7501 is used for the mains isolation.
When the output voltage rises, the reference voltage on the TL431 will exceed 2.5 V and the current through this device and the optocoupler LED will increase. By this, the optocoupler transistor will conduct more. When this current (at pin 4 of IC7500) exceeds 50 A, the MOSFET is switched "off", and the output voltage will drop. When this current drops below 40 A, the MOSFET is switched "on" again.

During the time that the MOSFET is "on", the IC has no supply voltage. To overcome this period, the energy stored in the bypass capacitor C2513 is used. This capacitor is charged during the time the MOSFET is "on".

As the TNY256 is sensitive for transients (mains spikes), a "peak clamp" circuit (300 V zenerdiodes 6501 and 6502) is used to limit the voltage to a safe level.

### 9.2.4 Fan Control (Optional, Diagram P4)

For ceiling mount or portrait-mode use, there is foreseen in four (two for the FM33) **optional** fans. The temperature within the monitor is measured via a sensor (R3372, KTY81) on the PSU. This sensor is, via A/D converter (item 7530 on the SCAVIO), connected to the OTC. According the temperature within the cabinet, the OTC-software will drive the PWM output of the OTC. The output (FAN_SP_x) is connected to the PSU, where a corresponding voltage is generated to supply the fans. This FAN_SUPPLY_x voltage is proportional to the duty cycle of the corresponding PWM signal.
The OTC senses the temperature every five s. If it has reached the alarm temperature, and this value has been measured three times consequently, the monitor will go into protection and a error-code is generated.

### 9.2.5 Pre-conditioner (Diagram P5)

**Warning:** the pre-conditioner does **not** provide mains isolation.

***Introduction***
The European Law describes a reduction of mains harmonics for apparatus with a power consumption above 75 W. Therefore the pre-conditioner is designed. This module serves as the interface between the mains input and the V_s/V_a supply.
The advantage of a pre-conditioner is (compared to a mains input filter):
- Reduction of mains harmonics to legal limits.
- Lower mains current for the same output power.
- Power factor close to 1.
- Stable regulated output.
- Small and low weight.

The input voltage of the pre-conditioner is universal, between 95 and 264 V_ac. The output is 400 V_dc (400V_HOT) with a maximum output power of 300 W (FM23) or 400 W (*FM24 and FM33*). This output voltage is delivered to the V_s supply.

***Operation***

*Start-up*
The two relays (1450 and 1460, diagram P2) are controlled via the SUPPLY_ON signal. This signal will become "high" when the +9V_STBY_SW, the STANDBY (from the OTC), and the LATCH signal are "ok". It then switches indirect relay 1450 via transistor 7460 and so enables the use of a small, low voltage, switch.
To protect rectifier 6600 and relay 1450, the inrush current is limited to a maximum of 20 A by charging the capacitor 2605 through a PTC (items 3450 and 3451) and an NTC (items 3452 and/or 3453).
After approximately 0.5 sec, relay 1460 is activated. This relay will short the PTCs. The advantage of using an NTC, is the fact that the resistance varies with the current and hence the mains voltage. At a high mains voltage, the current is lower for the same power.

Two clamp diodes 6605 and 6606, charge output capacitor C2616 to the peak voltage of the mains input. During normal operation, both diodes are blocked because of the output voltage of 400 V_dc, and will only conduct if there is a mains spike or an output dip.

Capacitor 2616 then delivers, via R3668, the start-up voltage at pin 16 of IC7650. After the start-up cycle, IC7650 is supplied via auxiliary winding 1-2. Capacitor C2663 is charged during the cycle that MOSFET 7610 conducts. While MOSFET 7610 is switched "off", this capacitor transfers its energy via D6661 to:
- The input of stabiliser IC7660 (*for FM23 and FM24*).
- The input of DC-DC converter IC7661 (*for FM33*). This circuit was changed for a better efficiency.

The output voltage of this IC is fed via D6665 to V_cc pin 12 of IC7650.The slow start function is realised by the circuit consisting of transistor 7654, D6654, R3654, and C2654.

*Normal Operation*
An up-converter circuit is used for the pre-conditioner. The switching frequency of the converter is chosen much higher than the mains frequency. It is therefore possible to consider the supply as constant, during every high frequency period,

and the envelope of all voltage steps during the low frequency period approximates a half sine wave.
The output voltage of the pre-conditioner equals the input voltage, when the MOSFET is continuous switched "off", and increases while the MOSFET is switched "on".

The rectified mains input voltage is connected to pin 5 of IC7650 via voltage divider R3603/04/05 and R3651. This voltage is proportional with the mains input, and is used to change the duty cycle of the pulses, which are generated at pin 11. Because the width of these pulses is not small enough, the circuit around transistors 7640 and 7641 is added. It decreases the duration of the square wave by 500 ns (this value is set by R3640 and C2640).
A demagnetisation winding (pin 1-2 of L5600) detects when there is no energy in the transformer. This information is fed to IC7650 pin 7 and this is used to switch "on" the MOSFET (7610). In this way, the dissipation is very low, combined with a low EMI.
The MOSFET 7610 is switched "off" at high currents, up to 15 A. To reduce dissipation, this is done at high speed for which "turn off driver" T7608 is used.

The output voltage (400 V) is divided by R3680/81/82 and R3671 and connected to pin 3 of IC7650. A change in the load will adjust the duty cycle of the gate pulse at pin 11, in order to keep the output voltage constant. Therefore, there is no need to adjust the output voltage by means of a potentiometer.

#### *Protections*

*Current Protection*
The current through FET 7610 flows also through the sense resistors 3614 and 3615. The voltage across these resistors is fed to pin 6 of IC7650. If the current exceeds its reference level, the pre-conditioner will switch "off". A filter, formed by C2666 and R3666, avoids unnecessary protection triggering due to spikes.
C2665 and R3665 on pin 13 determine the maximum oscillating frequency.

### 9.2.6 LLC Supply (Diagram P6)

#### *Introduction*

The V_s supply (70-90V) is based upon the so-called LLC converter technology (also used in the MG3.1 and FTV1.9). It is used to supply the power of the sustain pulses, which generate the light in the PDP. The voltage is set by a reference DC voltage (V_rs), coming from the PDP.
The V_a voltage (derived from V_s) is used to supply the power for driving the addressing electrodes of the PDP. The value of V_a is also depending on a reference voltage (V_ra) coming from the PDP.

The main supply hosts the following supplies:
- V_s supply, via an LLC converter.
- V_a supply, derived from V_s via a down converter.
- V_cc, via a flyback converter.
- 3V3, via a down converter.
- Audio amplifier supplies (V_SND_POS and V_SND_NEG), via a transformer.

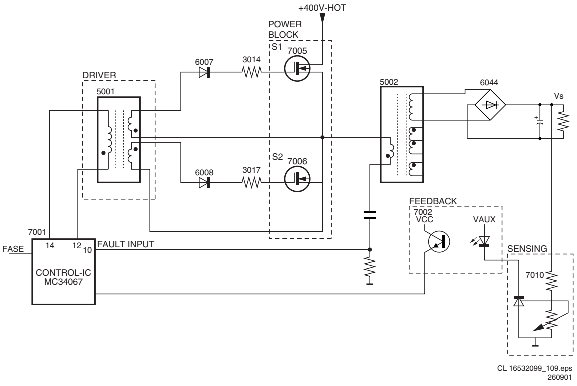

Figure 9-4 V_s supply

The start-up voltage for the IC is derived from one phase, the IC starts to oscillate, and alternately S1 and S2 are driven into conduction with a dead time in between. This effects that, via the resonance circuit and the MOSFETS, energy is stored into transformer L5002 (and L5004 for *FM24* and FM33).
The secondary voltages are rectified and smoothed, these voltages are, via a voltage divider, fed to the optocoupler that influences the oscillator frequency of the control IC and stabilises the secondary voltages. If the current becomes too high, the supply is switched "off" via the fault input of the control IC.

Advantages:
- High efficiency (more then 90%, other supplies 75%).
- Less radiation.
- Cost effective (two MOSFETS of 400 V cost less than one MOSFET of 600 V).

Disadvantages:
- Very low power stand-by impossible.
- Realisation and stabilisation is more complex.

#### *Operation V_s Supply*

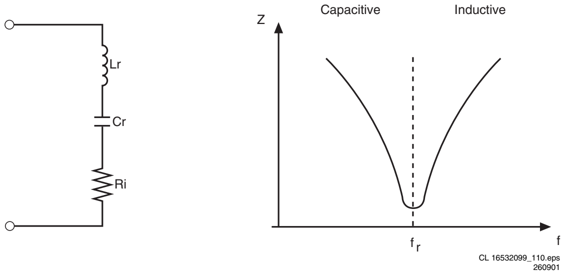

Figure 9-5 Impedance characteristic

*General*
The LLC supply is a serial resonance power supply. The coil, resistor, and capacitor form a trap at the resonance frequency f_r. The impedance is frequency dependent. The smallest impedance is at the resonance frequency (f_r), at the right side of f_r is the inductive part, and at the left side the capacitive part. The supply works in the inductive part, since higher frequencies causes minor losses.
Stabilisation is realised, by regulating the frequency as function of the output voltage (V_S_UNSW) and power. The load is stabilised by influencing the series-loop. The higher the frequency, the lower the output power.

The supply voltage of the control IC comes from the 25V_HOT voltage of the standby supply (via stabiliser 7093), and is lead to pin 15 of the IC. The IC starts to oscillate. This supply line has a short-circuit protection via opto-coupler 7003; when the supply is regulating, the current through the opto-coupler is amplified and will deliver power to the IC.

Control is done in the usual way by a TL431 at the secondary side. Voltage V_rs, a control signal coming from the display, is mixed into the feedback voltage, using an additional TL431 (7011 at schematic P6). It influences the output of the V_s supply. The output voltage of the V_s supply varies according the following formula: V_s = 70 + (10 * V_rs). Via this stabilisation circuitry for V_s, the output voltage is stabilised. If necessary, it is possible to adjust the voltage via potmeter R3026 (not for FM33).
The V_s is fed via a voltage divider to IC7010 (TL431). If the voltage at pin 3 of IC7010 is higher than 2.5 V, a current will flow from cathode to anode. This current also flows through the secondary side of the optocoupler 7002. The voltage at pin 7 of the MC34067, determines the output frequency. The higher this voltage, the higher the output frequency. Thus, if the voltage on pin 7 increases, the frequency increases and V_s decreases.
When the output voltage rises, the voltage at the reference IC7010 also rises, this causes the current through the diode of the opto-coupler to rise. The transistor of the opto-coupler conducts more, because of which the voltage at pin 7 of the MC34067 increases.

Accurate Over Voltage Protection (OVP) is added, using a TL431 (7304, diagram P3) as reference/comparator and an additional optocoupler (7003) that acts on the fault input pin 10 of the MC34067P (see also "Power Supply Protections ").

*The Controller*
The MC34067P controller, is used for the following reasons:

- Zero voltage switching.
- Variable frequency oscillator (above 1 MHz).
- Precision one-shot timer for the dead time.
- 5 V reference output.
- Double, high current totem-pole output.
- Soft start.
- Wideband error amplifier.
- Fault input (protection).

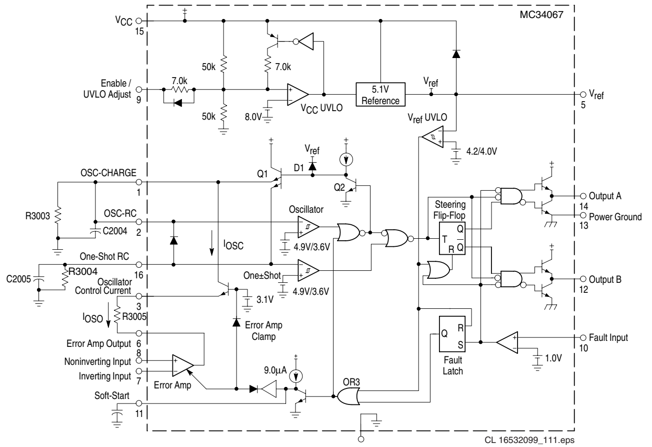

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Figure 9-6 MC34067

The oscillator circuit is build around an internal comparator with two threshold-voltages: 4.9 and 3.6 V.
C2004 is first charged via transistor Q1. If the voltage across C2004 is more then 4.9 V, the output of the upper comparator becomes low, the NOR-port output will be high, and Q1 will be blocked because the base will be shortened by Q2. C2004 will be discharged via the resistors R3003 and the oscillator control current (I_osc).
If the voltage across C2004 is below the lower threshold (3.6 V), transistor Q1 is conducting and the capacitor is charged again. The oscillation frequency is modulated by the oscillator control current.
The discharge current increases, when pin 3 is loaded even more; thus the lower the voltage on pin 3, the higher the oscillator control current and the higher the frequency. The maximum frequency is reached when the output of the error amp is minimal (0.1 V). Thus, R3005 determines the maximum frequency.
The minimum frequency is reached, when I_osc current is zero: C2004 then discharges only via the resistor R3003.

*One Shot Timer*
The one-shot timer is present, to de-activate both outputs simultaneously, and to provide a dead time, so that only one output will be activated.
The one-shot capacitor (C2005) is first charged by Q1. The one-shot period begins when the oscillator comparator is switched "off" by Q1. The one-shot capacitor is discharged via the parallel resistance (R3004): if this voltage gets lower than the lower threshold of 3.6 V, the comparator will be high and controls the flip-flop, which makes one of both outputs high.
If Q1 is re-conducted through the oscillator comparator, the one-shot capacitor is re-charged.

*Fault Detector Input*
At pin 10, there is a fault detector input. If this voltage reaches 1 V, the output of the OpAmp goes high, and both drive outputs are switched "off".
In addition, the output of OR3 will be high via the "fault latch". The output of OR3 drives Q1, so both the oscillator and the one-shot-capacitor remain charged. Via OR3, the soft-start capacitor is discharged.

*Soft-start*
Due to the soft-start circuit, the oscillator starts with maximum frequency. The low voltage on the soft-start capacitor (C2027) is buffered and keeps the error amplifier output low (if I_osc = max then f_osc = max).
The capacitor is charged with a current of 9 uA, the output of the buffer gets high, and the error amplifier input takes charge of the oscillator control current.

*Driver stage*
The two secondary windings of the driver transformer control the two switching MOSFETs. The primary winding of the driver transformer is alternately controlled by the two totem-pole outputs of the controller. Cross-conduction of both MOSFETs is prevented by the dead time.
The gate of each MOSFET is controlled via diodes 6007/6008 and resistors 3014/3017.
The transistors 7007/7008 discharge the gate faster by switching "off" situations.
The diodes 6017/6028 at the base-emitter of 7007/7008 prevent the zener effect of these transistors.
The zener diodes at the gate-source of 7005/7006 are for ESD protection.
C2011 and C2014, form the capacity for the series resonant circuit.

*MOSFET switching*
The total switching time can be distributed over 12 phases with different current paths. Only four phases are discussed to simplify the explanation:

**Phase 1** (S1 closed, S2 open)

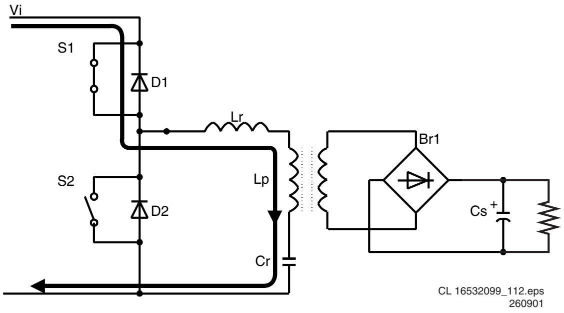

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**Figure 9-7 Phase 1 Resonance Supply**

The gate of MOSFET 1 is positive, which causes S1 to close. The input voltage Vi of 400 V_dc provides a current flow through S1 and the series circuit. At the same time, a current flows through the rectifier diodes in the secondary winding, which will charge capacitor Cs.
The current through Lr starts negative, but it is increasing to change polarity.
Capacitor Cr is charged sinusoidal, while the voltage at Lr drops. This makes the current drop.

**Phase 2** (S1 open, S2 open = dead time)

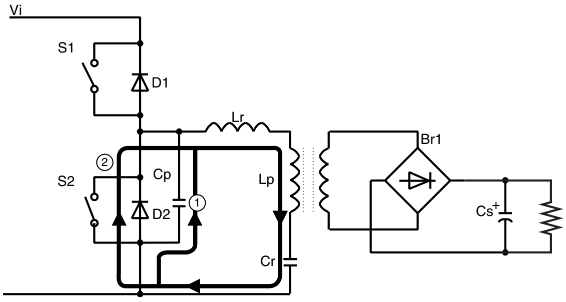

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**Figure 9-8 Phase 2 Resonance Supply**

Before the current reaches zero, S1 is opened. Now, both MOSFETs are not conducting. However, the current through the coils wants to continue. The capacity Cp releases its load to the series circuit, and the voltage at Cr continues to rise (Cp is the sum of several parasitic capacities).
1) The voltage at the drain of MOSFET 2 drops, because Cp is discharged at this moment [1]. This causes a voltage inversion across Lr and Lp. The secondary winding begins to feed back, charging capacitor Cs.
2) The voltage becomes negative, and diode D2 starts to conduct [2]. The secondary bridge remains conducting.

**Phase 3** (S1 open, S2 closed)

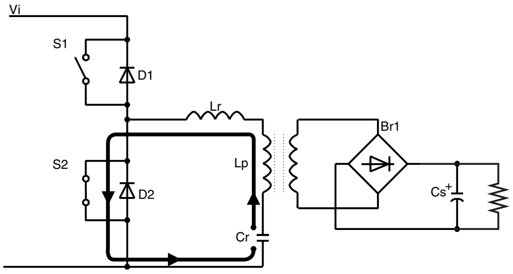

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**Figure 9-9 Phase 3 Resonance Supply**

The gate of MOSFET 2 is becoming high. The current through D2 is taken over by MOSFET 2. The switching losses are negligible, because the voltage across the switch is now approximately 1 V.
The current through Lr starts negative, but is increasing to change polarity. A current flows through MOSFET 2 and the series circuit. The bridge remains conducting, but its current gets zero because of the decreasing voltage across Lp. This is caused by the discharge of capacitor Cr. The voltage at capacitor Cr is decreasing sinusoidal and so is the voltage across Lp and Lr.

**Phase 4** (S1 open, S2 open = dead time)

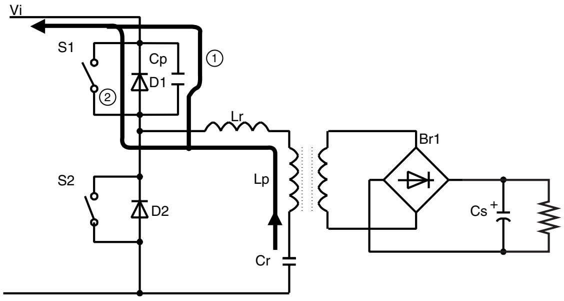

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**Figure 9-10 Phase 4 Resonance Supply**

Before the current reaches zero, S2 is opened. Now, both MOSFETs are not conducting, but the current through the coils wants to continue. The capacity Cp releases its load to the series circuit, and the voltage at Cr continues to fall (Cp is the sum of several parasitic capacities).
1) The voltage at the drain of MOSFET 2 increases, because Cp is discharged at this moment [1] (Cp was charged to 400 V). This causes a voltage inversion across Lr and Lp. The secondary winding begins to feed back, charging capacitor Cs.
2) The voltage becomes higher than 400 V, and diode D1 starts to conduct [2]. The secondary bridge remains conducting.

### *Protections MC34067*

*Over Current Protection (OCP)*
The voltage at R3021 is a criterion for the current, which flows through the primary winding. Via C2015 and D6010, the negative information is clamped at -0.6 V. The total amplitude is rectified via D6009 and C2010, and via R3020 and TS7009 supplied to the fault input (pin 10) of the controller.
When the fault input is higher than 1 V, the protection is activated.

*Over Voltage Protection (OVP)*
The voltage at R3010 is the take-over-winding voltage. This voltage is also supplied to pin 10 of the controller via a voltage divider R3010/R3011 When the fault input is higher than 1 V, the protection is activated.

*Soft-start Over Current Protection*
If short-term over current peaks occur, the frequency is adapted. The voltage at R3021 is clamped at -0.6 V via C2015 and D6010. The total amplitude is rectified via D6011 and C2008, and supplied to the "thyristor" TS7017/18 via R3012. When the voltage at the emitter of TS7017 gets higher than 5 V, the soft-start capacitor C2027 is discharged and the frequency increases. Because of this, the V_s will drop. If this voltage remains 5 V, the supply is interrupted (hick-up).
This circuit is adjusted in such a way, that the voltage does not drop too much if a flash occurs.

### 9.2.7 Aux. Supply (Diagram P7)

The "Aux. Supply" part hosts the supplies that are derived from the V_s supply:

- V_a supply.
- V_cc supply.
- 3V3 supply.
- Audio supply (V_SND_POS and V_SND_NEG).

**Note:**
In the FM24 monitor, a circuit is added (around 7143, 7144, and 7145), which takes care that the V_a and V_s supplies are discharged immediately after set switch "off". This to prevent discharge spikes of the elcaps. The circuit will ground the supply voltage of IC7112 as soon as its trigger line (+9V_STBY_SW) is switched "off".

***V_a Supply***
The V_a voltage is derived from the V_s voltage via the "down converter" principle. Control IC TEA1507 (item IC7112) and MOSFET TS7117 are used.

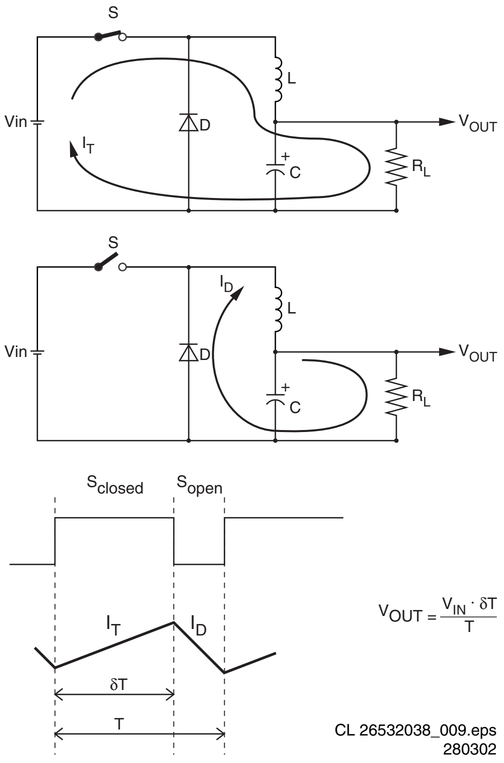

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**Figure 9-11 Principle of Down Converter**

After closing switch "S", the linear in time increasing current I_T will charge capacitor C.
Opening switch "S" will generate a counter-e.m.f. (= reverse voltage) in coil L, trying to maintain current I_T. This is possible via diode D (this diode is also called "freewheel diode"). Therefore, after opening "S", the magnetic energy stored in coil L will be transferred to electrostatic energy in capacitor C. The V_in will only supply current during the time that "S" is closed while a constant current is flowing through R_L.
V_out is directly proportional with V_in and the time that "S" is closed, and reverse proportional with period time "T". Therefore, by changing the duty cycle, it will be possible to control V_out.
To apply this on this chassis (diagram P7): replace switch "S" by FET TS7117, coil L by L5120 (or L5121 for the FM33), diode D by D6120, C by C2121, V_in= 77-100V, and V_out= V_a.

Stabilising is done in the same way as for the V_s supply. Voltage V_ra , coming from the display, is mixed into the feedback voltage using an additional TL431 (item 7130). This influences the output of the V_a supply. The output voltage of the V_a supply varies according the following formula: V_a = 30 + (20 * V_ra).

***V_cc Supply***
This part delivers, besides the V_cc voltage, also +12V (+10V for the FM33) for the optional fan control and, derived from this voltage, an +8V6 (for small signal analogue circuitry).
The V_cc voltage is derived from the V_s voltage via the flyback converter principle. Control IC TEA1507 (item 7212) and MOSFET 7217 are used.

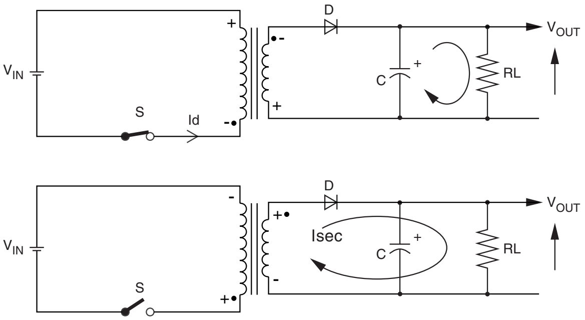

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**Figure 9-12 Principle of Flyback Converter**

After closing switch "S", the current I_D will increase linear in time. The magnetic energy in the primary coil is directly proportional with the self-inductance of the coil and current I_D (thus with the time the switch is closed).
The voltage polarity at the secondary winding is negative (due to different winding direction), meaning that diode D will block. Capacitor C will discharge via R_L, and V_out will decrease. Opening switch "S" will generate a counter-e.m.f. in the primary winding, trying to maintain current I_D. Through this the polarity of the secondary voltage will inverse. The magnetic energy, stored in the coil, will now be transformed to the secondary side. Diode D will now conduct, capacitor C will be charged and V_out will increase.
To apply this on this chassis (diagram P7): replace switch "S" by FET TS7217, coil L by L5220, diode D by D6224, C by C2224, V_in= V_S_UNSW, and V_out= V_cc.

**Note:** While in the *FM23 and FM24* the +12V is derived via the flyback converter principle, in the FM33 this is done via a voltage doubler circuit.
The negative side of C2229 has an average voltage level of 0 V as it is connected to the secondary side of L5220. Its positive side is connected to the +5V (V_cc). When diode D6225 conducts, there will be +5.5 V on its anode (+5 V plus the forward voltage). This means that there will be +10.5 V at the positive side of C2229. The resulting voltage over C2230 will be +10 V (+10.5 V minus the diode forward voltage of D6230).

***3V3 Supply***
The +3.3 V is generated to supply the SCAVIO panel. This voltage, is directly derived from the LLC supply (diagram P6):

- FM23: Via a fuse (1005/1045), this voltage is rectified by diodes 6021/6045 and smoothed by C2022 (+18V line). Via control IC L4973V (item 7260, diagram P7), the 3V3 voltage is generated. This IC contains a complete down converter, with integrated MOSFET.
- FM24: Via a fuse (1005/1045), this voltage is rectified by diodes 6021/6045 and smoothed by C2022 (+15V line). Via control IC L4973V (item 7260, diagram P7), the 3V3 voltage is generated. This IC contains a complete down converter, with integrated MOSFET.
- FM33: Via a fuse (1082/1083), this voltage is rectified by diodes 6021/6045 and smoothed by C2022 (+9V line). Via control IC L6910 (item 7260, diagram P7), the 3V3 voltage is generated. This IC contains a complete down converter, with integrated MOSFET. This IC has a better efficiency

compared to the L4973V that is used in the *FM23 and FM24*.

All these circuits use double diodes per voltage, in order create a symmetrical load for the transformer.

***Audio Supply***

This is a "floating" symmetrical supply (±14.5 V) derived from V_s via transformer 5290. Because this voltage is tightly coupled to the V_s voltage, this voltage varies considerable, between 11 V (max. load, V_s = 70 V) and 20 V (min. load, V_s = 90 V).

The Audio ground is connected to the normal secondary ground, with a capacitor (C2290) and a resistor (R3292) in parallel, in order to suppress spurious oscillations.

### 9.2.8 Power Supply Protections (Diagram P3)

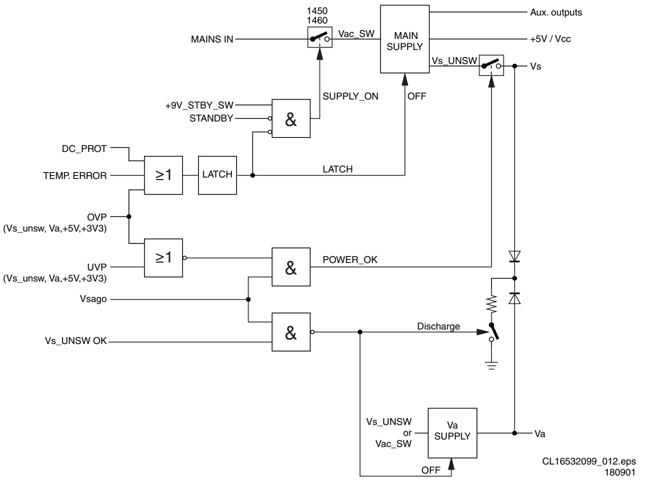

**Figure 9-13 Protections**

In general, all efforts are taken, to make a safe power supply. Therefore, all major outputs are monitored with respect to over- and/or under voltage. All protections are handled by hardware. The software only monitors the hardware to generate error codes for service.

Via I2C, errors of the power supply are transmitted to the microprocessor on the SCAVIO panel. If an error occurs, the POWER_OK line will change from "high" to "low". The errors are transmitted to the microprocessor, on the following ports and pin numbers of the I/O expander PCF8574AT (item 7370):

**Table 9-2 IC7370 Inputs**

| Pin | Name | Description |
|---|---|---|
| 4 | V_s | Detection of under- or overvoltage on V_s |
| 5 | V_a | Detection of under- or overvoltage on V_a |
| 6 | +5V | Detection of under- or overvoltage on +5V |
| 7 | +3V3 | Detection of under- or overvoltage on +3V3 |
| 9 | OVP | Detection of overvoltage on V_s, V_a, +5V or +3V3 |
| 10 | Switch | Detection of functional switch |
| 11 | DC_PROT | Detection of DC_PROT going high |
| 12 | TEMP | Detection of over temp. inside power supply |

This POWER_OK signal is connected to an interrupt pin of the OTC, in order to be read as fast as possible. This is very important in case of a time-limited error like over-voltage. After detection of the error, the control system will log the error in NVM, and transmit the first occurrence back to the power supply through the I2C bus.

**Note:** The POK signal is fed to buffer 7366, together with the "8V6_UNDER_VOLTAGE" and "SWITCH" sensing. The output of this buffer, the POWER_OK line, will follow the inputs.

***Operation***

*V_s Protection*

Detection of over- or under voltage on V_S_UNSW by comparators IC7308-A and -B. If this voltage exceeds certain levels (set via voltage dividers), the protection will activate the Power OK (POK, active "low"), which will shut down the set.

*V_a Protection*

Detection of over- or under voltage on V_a by comparators IC7308-C and -D. If this voltage exceeds certain levels (set via voltage dividers), the protection will activate the Power OK (POK, active "low"), which will shut down the set.

*V_cc Protection*

Detection of over- or under voltage on V_cc (+5 V) by comparators IC7330-A and -B. If this voltage exceeds certain levels (set via voltage dividers), the protection will activate the Power OK (POK, active "low"), which will shut down the set.

*+3V3 Protection*

Detection of over- or under voltage on the +3V3 voltage by comparators IC7330-C and -D. If this voltage exceeds certain levels (set via voltage dividers), the protection will activate the Power OK (POK, active "low"), which will shut down the set.

*OVP protection*

This line detects, if one of the above mentioned voltage protections is an over-voltage protection. Therefore, this works in combination with the above-mentioned under/over voltage protections.

*Latch Protection*

When an OVP-, DC-, or Temperature protection occurs, thyristor 6348 is fired and the LATCH signal is made "low". This signal will switch "off" the main supply and prevents that the supply is switched "on" again, as long as the protection is active.

In addition, the V_cego signal can activate the LATCH signal (via TS7352 and 7348), but this is temporarily. This is done for correct start-up behaviour.

*DC Protection*

Detection of a DC voltage on the audio amplifier outputs. If a DC voltage is detected, TS7362 will activate the Power OK (POK, active "low"), which will shut down the set.

*Temperature Protection*

- *FM23 and FM24*: Detection of the temperature (via PTC 3368) in the power supply by comparator IC7366-A. If this voltage exceeds a certain level (set via voltage dividers), the protection will activate the Power OK (POK), which will shut down the set.
- *FM33:* via an I2C temp sensor IC7372. This LM75A is a temperature-to-digital converter using an on-chip temperature sensor, and provides an Over-temp Shutdown (OS) output. It communicates via I2C. The device is powered-up in normal operation mode with the OS in comparator mode, temperature threshold of 80 °C and hysteresis of 75 °C, so that it can be used as a stand-alone thermostat with those pre-defined temperature set points.

## 9.3 VGA Connector Panel (Diagram VGA)

The Video Graphics Array (VGA) panel serves as an interface between the peripheral VGA equipment (Receiver box, PC, etc.) and the SCAVIO panel. Some specifications of this panel:

- Two NVMs are present, which hold identification data for the DDC line.
- Further, there are buffers present for the incoming and outgoing sync signals.
- RC_OUT cinch for linking with other equipment.
- Provision to terminate the incoming sync lines with 75 Ohm via the EBOX_PRESENT line.

For a description, see the next "SCAVIO" chapter.

## 9.4 SCAVIO Panel (Diagrams SC)

The Scaler Control Audio Video Input Output (SCAVIO) panel contains:

- All the input connectors,
- Analogue and digital video processing,
- Scaler (co-processor)
- Interface to the PDP,
- Audio processing (excluding the audio amplifier),
- OTC (main processor), and
- RS232C in/out.

**Note:** There are two versions of this panel, a *Basic* and an *Enhanced* version. Therefore, many components are not mounted for the *Basic* version.

For the circuit description, we divide the board into the following parts:

1. Supply
2. Video processing
3. Audio processing
4. Control

### 9.4.1 Supply

See figure "Power Supply Path" in paragraph "Power Supply 9.1.5".

### 9.4.2 Video Processing (Diagrams SC3, 4, 5, 6, 10, 11 and 12)

***Introduction***

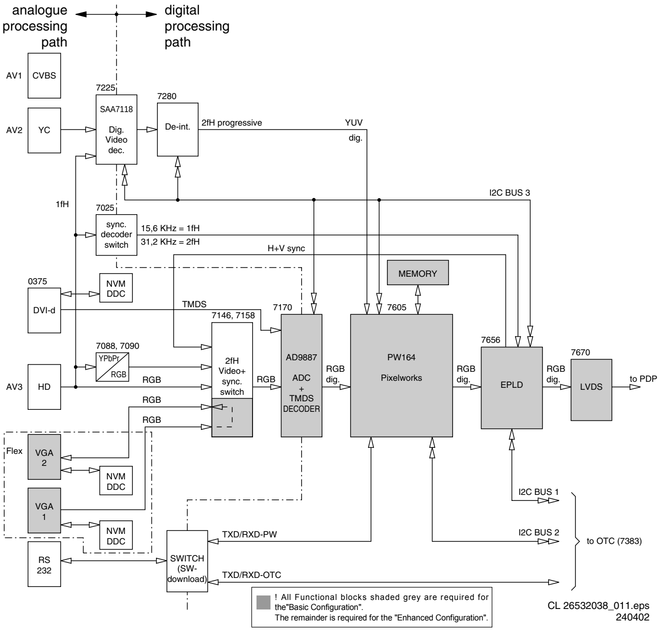
analogue processing path
digital processing path
AV1
CVBS
AV2
YC
7225
SAA7118
Dig. Video dec.
7280
De-int.
2fH progressive
YUV dig.
I2C BUS 3
1fH
7025
sync. decoder switch
15,6 KHz = 1fH
31,2 KHz = 2fH
H+V sync
MEMORY
0375
DVI-d
NVM DDC
TMDS
7146, 7158
7170
7605
7656
7670
7088, 7090
YPbPr
RGB
2fH Video+ sync. switch
AD9887
ADC + TMDS DECODER
RGB dig.
PW164
Pixelworks
EPLD
LVDS
to PDP
AV3
HD
RGB
RGB
RGB
Flex
VGA 2
NVM DDC
VGA 1
NVM DDC
RS 232
SWITCH (SW-download)
TXD/RXD-PW
TXD/RXD-OTC
I2C BUS 1
I2C BUS 2
to OTC (7383)
! All Functional blocks shaded grey are required for the"Basic Configuration".
The remainder is required for the "Enhanced Configuration".
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**Figure 9-14 Video path**

This mainly consists of a small analogue processing part and a bigger digital signal processing part.

The video inputs like CVBS, YC, High Definition RGB, or YUV (1fH and 2fH), VGA, and DVI-D are received and processed. The YPbPr (2fH) is discretely converted to RGB, whereas the YCbCr (1fH) is processed in the SAA7118 Digital Video decoder. The base-band video inputs (CVBS and YC) are output from the digital video decoder as digital YUV, which are then further processed by the Pixel Works Scaler.

The VGA signals are first AD converted and then processed by the PW Scaler.

The digital input on the DVI is first decoded by the TMDS decoder inside the AD9887 and then processed by the PW Scaler.

The PW Scaler output is going through an EPLD and then via the LVDS transmitter to the PDP (Plasma Display Panel) as differential serial data. The PDP is based on ALiS (Alternate Lighting of Surface) technology and is an interlaced display, with separate ODD and EVEN fields to be displayed.

***Analogue Video***

This part describes the analogue video and synchronisation path of all inputs, until it reaches the "analogue digital converters" of either the AD9887 (ADC+TMDS Decoder) or the SAA7118E (Digital Video Decoder).

In addition, the switching part is described and the necessary control signals.

In principle, all video control functions are done by the Pixel Works processor.

**Note:** This part also includes the VGA connector panel that is mounted on top of the SCAVIO panel.

*Inputs*

There are five video inputs, which are divided in three types:

- **VGA** (2fH): named VGA1 and VGA2. Both are 15-pole SUB-D connectors for RGB and HV, and are situated on the VGA connector panel. For automatic identification by a PC, each VGA input is foreseen with a DDC NVM IC. VGA2 is set default as loop through of VGA1. In the *Enhanced* version, VGA2 can be switched as output, via the control signals VGA2_OUT and VGA2_EN.
- **YPbPr/RGB** (combined 2fH and 1fH): named AV3 and suitable for YCbCr/HD-YPbPr/HD-RGB + HV. These are cinch inputs. YPbPr and RGB are seen as separate inputs by the HW and must be properly selected by SW.
- **CVBS** like (1fH): named AV1 for CVBS and AV2 for Y/C. These are also cinch inputs.

*Video Path*

The 1fH signals (including YPbPr) are buffered (item 7113/21/17) and go directly to a digital video processor, the SAA7118E (item 7225 on diagram SC5), where they are converted into a digital signal.

The 2fH signals are also buffered; both YPbPr (item 7074/84/79) and RGB (item 7141/38/35) buffers get the same input signals.

When YPbPr signals are connected, the correct input must be selected, to get a picture with proper colours. Thus, the signals must pass a video matrix (item 7088/90, see diagram SC3), where they are converted into RGB. There are two matrices, an NTSC and an ATSC. With the MATRIX_SEL signal, the correct matrix is chosen (item 7089). The detection is done automatic, by an algorithm in the EPLD.

After the matrix, the signals enter a clamp/blanking circuit (7102/03/04 and 7100), for the removal of the residual sync signals. The control is done via the lines HD_BLANKN and HD_CLAMPN coming from the EPLD.

All RGB signals come together at 4-pole switches (item 7146/58), one for each colour, where they are switched to the AD converter item 7170 (R_ADC, G_ADC and B_ADC).

*Sync Path*
All incoming H and V sync signals go to a 4-pole switch (item 7009) where SYNC_SEL and VIDEO_SEL_2 determine, which signal is available on the ADC.
Before this switch, the VGA sync path is rather straight, only 1 switch (item 7007) is added for the VGA2 sync signals, which determines if VGA2 sync is input or output (VGA2_OUT).
In the *Basic* configuration, these switches are omitted, and replaced by jumpers (4009/4010).

The external sync (AV1 - 3) signals are treated differently. Both H_HD_EXT and V_HD_EXT go to three circuits:
- A comparator circuitry with an LM319 (item 7025), to ensure both sync pulses are always positive going (H and V_SYNC_CMP),
- A level detection circuitry (items 7000 to 7002), to detect if the sync is of TTL level (H and V_SYNC_TTL),
- A positive/negative going detection circuitry (items 7006 to 7010), to indicate the polarity of the sync in case of TTL level (H and V_SYNC_POL_N).

All above-mentioned signals go to the EPLD (see diagram SC11) for further processing.

Processed sync signals H_HD and V_HD coming from the EPLD, are also switched to the ADC (H_ADC and V_ADC) along with the proper RGB signals (R_ADC, G_ADC and B_ADC).

### *Digital Video*
This part describes the digital video path on the SCAVIO panel, starting at the AD converters in either the AD9887 (item 7170) or in the SAA7118E (item 7225) and ending at the output for the PDP.
For both the *Basic* as the *Enhanced* version, everything "after" the Pixel Works chip, is equal.
For the *Basic* version, the input for the Pixel Works only consists of the "Graphics path".
For the *Enhanced* version, it is both the "Graphics path" as the "Video path".

The SCAVIO panel contains the following functions in the video path:
1. The "YPbPr to RGB matrix" and "2fH Video+Sync Switch" are explained above in the "Analogue Video" part.
2. The "Digital Video" path containing the Digital Video Decoder and the De-interlacer.
3. The "Digital Graphics" path containing the ADC+TMDS decoder.
4. The "Scaler" which is the Pixel Works (PW164-10R) plus Memory.
5. The "EPLD" for sync decoding and video manipulation.
6. The "LVDS" encoder.

*The Digital "Graphics Path"*
This is a straightforward application of the Analogue Devices AD9887 (item 7170). Inputs for this device are:
- FTV Receiver box,
- VGA formats (up to SXGA at 75 Hz),
- 2fH RGB+HV (only in *Enhanced* version),
- 2fH YPbPr, which is converted to RGB by the "YUV to RGB" matrix (only in *Enhanced* version),
- DVI-d (only in *Enhanced* version).

Analogue input: The AD9887 is meant to sample "pixel synchronous". To achieve this, a (software) driver is running on the Pixel Works processor (PW). After hooking up a source to the AD9887, the PW starts counting the number of lines per field and calculates the H-period time. With these two values, it determines the exact match or the closest match out of a look-up-table (LUT) with VGA standards. When the correct standard is determined, the PW will set the AD9887 I2C registers to the correct value. The AD9887 should now sample with exact the same frequency as the incoming standard requires. This is done to get an optimal picture performance.
It also is a "must" when a computer graphics card is connected, because there is no, or very little, post anti-aliasing filtering done on such cards. Therefore, the outputted RGB samples need to be exactly aligned with the sampling of the AD converter.
Analogue input signals can go up to "SXGA at 75 Hz" format, which gives a pixel clock of 135 MHz. In fact, it can handle any standard with a pixel rate up to 140 MHz.
Special modes are made for the F21R E-box, for both PAL and NTSC. These are invoked when an E-box is connected to the SCAVIO panel.

**Digital input:** Via the DVI connector (*Enhanced* version only) it is possible to insert TMDS (Transition Minimised Differential Signalling) data into the SCAVIO panel. DVI is a fairly new computer graphics standard, which can be seen as the digital follow-up of the analogue VGA interface. The TMDS signal is directly fed into the AD9887, where any DVI standard up to "SXGA at 60 Hz" can be decoded to RGBHV.
The preferred VGA standard for this chassis is programmed in the DDC EEPROM (item 7215), which can be read by the PC. Via an internal switch, it is possible to choose between the analogue input and the digital input. The output format is for both inputs the same (8 bit RGB plus HV). The driver determines whether the AD9887 outputs single or dual pixels. For lower standards like "VGA at 60 Hz", the interface will be single pixel, which means that every clock cycle one byte of R, G, and B data is outputted. Dual pixel means that on every clock cycle two bytes of R, G, and B data outputted. These two bytes are de-multiplexed, which is done to make the interface more robust for jitter, set-up, and hold times, and to reduce the digital data rate over the PCB (reduced EMC).

*Digital "Video Path"*
This path is only available in the *Enhanced* version of the SCAVIO panel and is used for the following input signals:
- CVBS input,
- Y/C input, and
- 1fH YPbPr.

It is a straightforward application of the Philips SAA7118 (item 7225) and the Micronas SDA9400 (item 7280).
The SAA7118 is a PAL/NTSC/SECAM Digital Video Decoder with adaptive digital comb filter and component video input. It decodes all input standards to 4:2:2 YCbCr, which then is processed by the SDA9400.

The SDA9400 is a motion adaptive de-interlacer, which makes a progressive video signal from the interlaced input.
Depending on the motion in the picture, it will just interleave the odd and even field (no motion: ABAB) or repeats the same field twice; this is also known as line doubling (motion: AABB). The motion detection is pixel based, with a soft-switch between "motion" and "no motion".

After the de-interlacer, the signal is fed as a 4:2:2 YCbCr progressive scan signal to the video port of the Pixel Works processor.

*The Pixel Works PW164 Scaler*
The Pixel Works PW164 Image Processor is a highly integrated (Ball Grid Array, BGA) chip, which interfaces video inputs and computer graphics in virtually any format to the PDP.

Computer images from VGA to UXGA resolution input to the chip can be resized to fit on the PDP. Horizontal and vertical image scalers, coupled with intelligent frame locking circuitry create sharp images, centred on the screen and without user intervention. An embedded DRAM frame buffer and memory controller perform the frame rate conversion.

Video data from 4:3 aspect ratio NTSC or PAL and 16:9 aspect ratio sources such as HDTV and DVD are supported. Non-linear scaling (only with Receiver Box) and separate horizontal and vertical scalers allow these inputs to be resized optimally for the native resolution of the PDP.

For more information, see *http://www.pixelworksinc.com/index.phtml*

**Table 9-3 Pixel Works Scaler: Ports**

| Pin | Name | I/O | Remark |
|---|---|---|---|
| C2 | PW_SCL | +3V3 out | to I2C devices, Video related |
| B1 | PW_SDA | +3V3 out | to I2C devices, Video related |
| A1 | PW_SDA_NVM | +3V3 out | to I2C device NVM |
| C4 | PW_SCL_NVM | +3V3 out | to I2C device NVM |
| B3 | VGA2_OUTN | +3V3 out | Selects VGA 2 as output. (Low => Output) |
| A2 | VGA2_EN | +3V3 out | Enables VGA 2 (High = Enable) |
| A3 | VIDEO_SEL_1 | +3V3 out | to video selection switches (see truth table) |
| C5 | VIDEO_SEL_2 | +3V3 out | to video selection switches (see truth table) |
| B4 | SCL_2 | +3V3 out | to I2C device OTC |
| A4 | SDA_2 | +3V3 out | to I2C device OTC |
| C6 | SYNC | Input | Is 'high' if EPLD detects separate sync signals on YPbPr |
| B5 | 1_2FH | Input | Is 'high' if sync on YPbPr is 1fH (from EPLD) |
| D6 | SYNC_SEL | +3V3 out | To sync selection switches |
| A5 | FBX_MODE | Input | Is 'high' if E-box is detected |

**Table 9-4 Pixel Works Scaler: Video Select**

| VIDEO_SEL_1 | VIDEO_SEL_2 | Selected input for AD9887 |
|---|---|---|
| 0 | 0 | RGB 2fh |
| 0 | 1 | YPbPr 2fh |
| 1 | 0 | VGA 1 |
| 1 | 1 | VGA 2 |

**Service remark:** Desoldering/soldering of this IC requires very specialised (BGA) equipment. This can only be done by the Authorised Service Centres (ASC).

*The EPLD*
The main reason to add the EPLD is the contrast reserve function. Other reasons:

- **Black and white ADC adjustment.** The EPLD provides a high-resolution measurement of the black and white level, to adjust the gain and offset of the ADC (AD9887). It is read via I2C.
- **LVDS reset.** This function resets the LVDS transmitter on the SCAVIO board, in case the LVDS transmitter starts up without a clock. This could cause an abnormal picture. Therefore, as soon as the clock is not fast enough (as during start-up) the EPLD will keep the LVDS transmitter in reset.
- **Receiver-box mode detection.** For loop through mode (a second FTV monitor connected to the output of the first monitor), a secondary detection is needed to check the presence of an Receiver or E-box.
- **ATSC sync detection/ decoding.** Core for proper sync decoding for ATSC sources.
- **Contrast reserve.** This function can increase the gain of the video signal to a factor of two. It will reduce the gain again if it sees too many overflows (code 255) in any of the R, G, or B channels. Adjustable via two parameters: user contrast and overflow limit. Parameters are I2C controlled.

*The LVDS transmitter*
This DS90C385MTD56 IC from National Semiconductors converts 28 bits of CMOS/TTL data into four LVDS (Low Voltage Differential Signalling) data streams. A PLL transmit clock is transmitted in parallel with the data streams over a fifth LVDS link. Every cycle of the clock, 28 bits of input data are sampled and transmitted. At a transmit clock frequency of 36 MHz, 24 bits of RGB data and 3 bits of display control data are transmitted per LVDS data channel. This IC operates at 3.3 V

For more information, see *http://www.national.com/pf/DS/DS90C385.html#Datasheet*

***Picture Mute***
In some cases, it is necessary to mute the video output:

- In monitor mode:
  - During switch "on/off" of the monitor,
  - During source change,
  - During video or sync loss, or
  - By a user action (A/V-mute or mute)
  - In audio only mode (when the ICONN-box is connected).
- In TV mode:
  - During switch "on/off" of the Monitor/Receiver box,
  - During source change in the Receiver box,
  - During video or sync loss, or
  - In audio only mode (Receiver box mutes the picture).

Most of the picture mute controls are done via the Pixel Works co-processor.

***Anti Ageing***
In order to prevent visible luminance differences, due to ageing of the monitor, a special algorithm is implemented. This algorithm is based on horizontal shifting of the picture in the monitor. For good understanding some terms will now first be explained:

- **Ageing:** The effect that the efficiency of a plasma cell (pixel) decreases as a function of the total time that it is illuminated. This effect occurs mostly because of phosphor ageing. As a result, the cell brightness decreases over time. An alternative name for ageing is "burn-in".
- **Picture shifting:** Fixed structures, like logo's, OSDs, and subtitles, will cause burn-in effects. The only way to mask this to a certain extends, is picture shifting so that the "burn-in" effect is smeared out over a larger area, and makes it less visible.

Most of the anti-ageing controls are implemented in the Pixel Works co-processor.

*Horizontal*
Horizontal anti-ageing steps:

- **Step width/height,** the step width/height shall be 1 horizontal pixel width (approx. 1 mm).
- **Number of steps,** the maximum number of steps in horizontal direction shall be 9.
- **Time between steps,** the time between the steps shall be 5 minutes.

The effect of H anti-ageing is a horizontal movement (start at 0):

0 → 1 → 2 → 3 → 4
12 ← 11← 10 ← 9 ← 8 ← 7 ← 6 ← 5 ←
→ 13→ 14 → 15

With the following sequence:
0 → 1 → 2 → ...... → 14 → 15 → 0 → 1 → etc.

After every step, the updated value is stored in NVM and gives an indication about the direction (0...4 and 13...15 to the right and 5...12 to the left).

The horizontal anti-ageing is a process, which is basically independent of any other processes that are running in SW. This means that this process should never be reset in order to get the best anti-ageing effect. Therefore, the horizontal shift positions and directions need to be stored in NVM, so that he anti-ageing process returns to its latest position after the set has been switched off or to standby. There is only one H and one V shift value for the anti-ageing process that is applicable for the AV1, AV2, and AV3 inputs.

**Note:** Horizontal shift cannot be done for sources that are screen filling and do not have sufficient overscan.

*Vertical*
V-shift is done in the F21RE Receiver box when the TV mode is active, or in the *enhanced* configuration when the monitor mode is active.

Vertical anti-ageing steps:
- **Height/height,** the height/height shall be one display line (approximately 1 mm).
- **Number of steps,** the maximum number of steps in vertical direction shall be nine.
- **Time between steps,** the time between the steps shall be 80 minutes, which equals one complete horizontal ageing shift (16 steps x 5 minutes).

The effect of V anti-ageing is a vertical movement (start at 0):
4
↑ ↓
3 5
↑ ↓
2 6
↑ ↓
1 7
↑ ↓
0 8
↓
9 15
↓ ↑
10 14
↓ ↑
11 13
↓ ↑
12

With the following sequence:
0 → 1 → 2 → ...... → 14 → 15 → 0 → 1 → etc.

After every step, the vertical shift position and its direction are stored in NVM. So the anti-ageing process returns to its last position after the set has been switched off (or to standby). Also, if by any cause (i.e. VGA-source selection or when service/factory mode is active), the anti-ageing process is stopped; the vertical shift position should be restored after resuming the anti-ageing process.

### 9.4.3 Audio processing (Diagrams SC13, 14 and 15)

This chapter describes the audio **processing** on the SCAVIO board. The circuit enables to connect several audio sources, selects the source on the desired input, and performs audio processing and audio delay. It also matches the output signals for the Audio Amplifier panel.
The sound-related electronics are very straight forward, and consists of a Micronas MSP3415G sound processor, an active high pass, and low pass filter, and separate Class-D amplifiers for the woofers and tweeters.

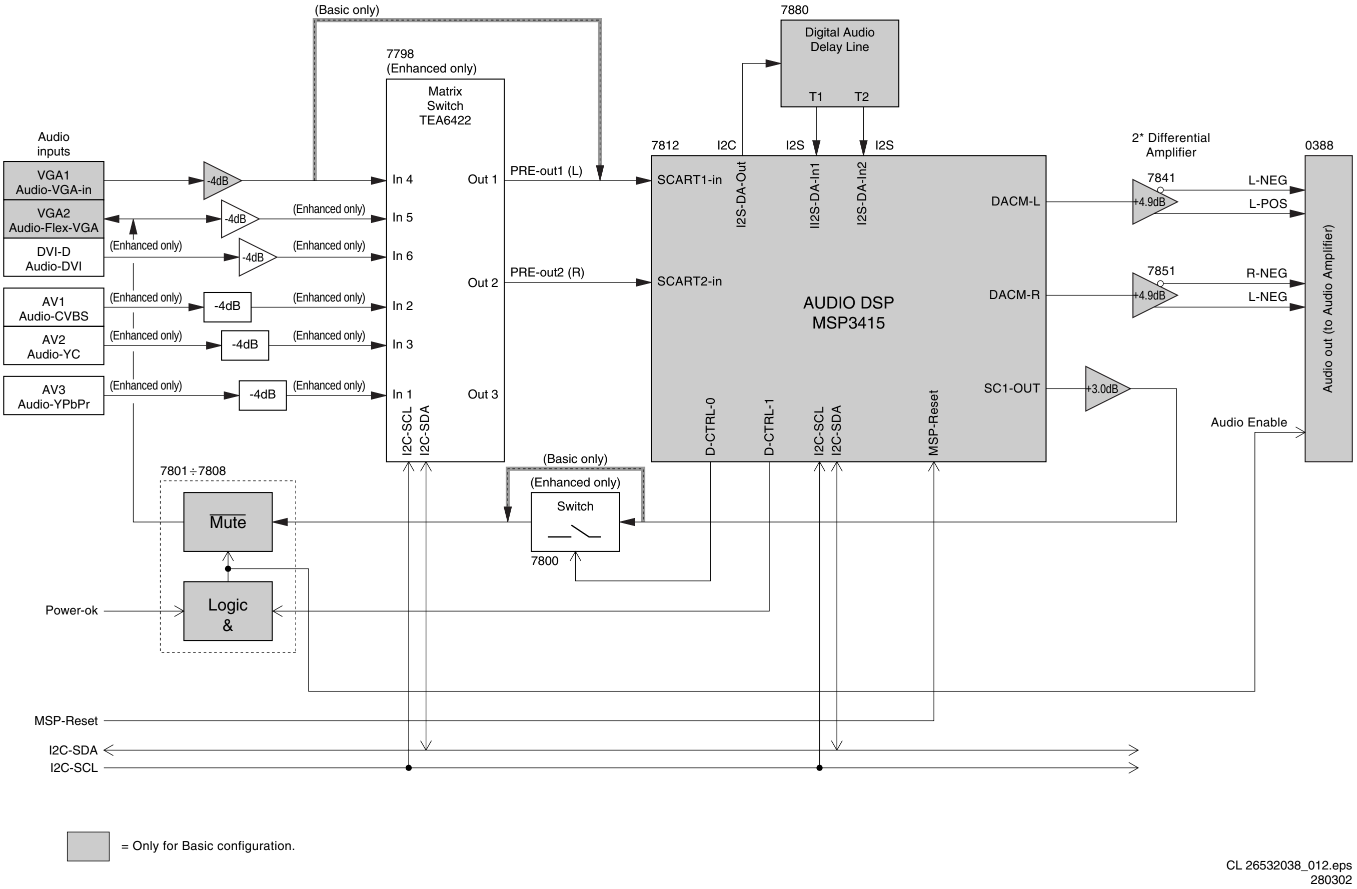
(Basic only)
7798
(Enhanced only)
Matrix Switch TEA6422
7880
Digital Audio Delay Line
T1
T2
Audio inputs
VGA1 Audio-VGA-in
VGA2 Audio-Flex-VGA
DVI-D Audio-DVI
AV1 Audio-CVBS
AV2 Audio-YC
AV3 Audio-YPbPr
-4dB
(Enhanced only)
In 4
In 5
In 6
In 2
In 3
In 1
Out 1
Out 2
Out 3
I2C-SCL
I2C-SDA
PRE-out1 (L)
PRE-out2 (R)
7812
I2C
I2S
SCART1-in
SCART2-in
I2S-DA-Out
I2S-DA-In1
I2S-DA-In2
AUDIO DSP MSP3415
DACM-L
DACM-R
SC1-OUT
D-CTRL-0
D-CTRL-1
MSP-Reset
2* Differential Amplifier
7841
7851
+4.9dB
+3.0dB
L-NEG
L-POS
R-NEG
0388
Audio out (to Audio Amplifier)
Audio Enable
7801÷7808
Mute
Logic &
Power-ok
Switch
7800
MSP-Reset
I2C-SDA
I2C-SCL
= Only for Basic configuration.
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**Figure 9-15 Audio Path**

The processing part consists mainly of the following components:

- **MSP3415G**: a DSP sound processor from Micronas. This component is able to do all kinds of digital signal processing like volume, bass/treble, Ultra Bass, and balance. It has analogue inputs and outputs, as well as an I2S in/output used for digital audio delay.
- **RAM** with its logic to be able to store the I2S information for audio delay.
- **Anti-plop/ mute circuit:** which is necessary to prevent disturbances on the audio lines during start-up or switching.
- **TEA6422:** a matrix switch of ST. This component is able to switch six inputs to three different outputs (only used in the Enhanced version).

***MSP3415G***

*Ultra Bass*
Because of the closed box implementation in this FM-chassis, a common DBE solution will not give an optimal bass performance. A closed box needs a substantial boost over a wide frequency range, while DBE operates in a limited frequency region.
Adaptive Ultra Bass 2 (UB2) is a suitable alternative. This feature is based on the psycho-acoustic effect of the missing fundamental, and gives the impression of a deep bass, while the loudspeakers do not reproduce these low frequencies. This feature is implemented in the MSP3415G. In the FM-chassis, this feature is always switched "on".

*Audio delay*
To compensate for "lip sync error" (the difference in time between the aural and visual perceptions), two different audio delays are selectable via the customer's menu (one for the Receiver box and one for the Monitor).
This is done at the audio processor IC7812 via an I2S bus and an additional delay circuit (IC7880 - 7882).
One can select delays of 24 ms (I2S_DATA_IN1) and 40 ms (I2S_DATA_IN2), or no delay.
In case of a delay, the AUDIO_L/R_IN is re-routed as I2S_DATA_OUT to the audio delay circuit and, depending on the selected delay, returned as I2S_DATA_IN1 or I2S_DATA_IN2, resulting in AUDIO_L/R_OUT.

*Anti-plop/Mute*
In several cases, it is necessary to mute the sound output. This muting is handled by the MSP sound processor, or by the Receiver box in case of TV-mode.

- In Monitor mode:
  - During switch "on/off" of the monitor.
  - During source change.
  - During video or sync loss, or
  - By a user action (A/V-mute or mute).
- In TV mode:
  - During switch "on/off" of the Monitor/Receiver box.
  - During source change in the Receiver box.
  - During video or sync loss, or
  - By a user action (mute).

### 9.4.4 Control (Diagrams SC7, 8 and 9)

***Introduction***

As a main controller, the so-called ARTISTIC is used, better known as OTC (**O**n screen display, **T**eletext and **C**ontrol). It is a 8051 (XA) based controller from Philips Semiconductors, the SAA5801H.
Although the OTC is the main controller, it acts as a "slave" when communicating with the Pixel Works IC via the I2C-bus 2.

When the monitor is connected to an F21RE Receiver box, the UART commands from the Receiver box will control the monitor.

In stand-alone mode, the monitor can be controlled via the Remote Control or via the RS232C port.

DDC1/2B (Display Data Channel, an I2C based protocol) is implemented with separate NVMs for the two VGA inputs and the DVI-D input as well.

It is also possible to use the RS232C port for software upload to the PW Scaler and the OTC. The target for downloading is controlled via a switch in the RS232C path; the switch itself is controlled by the OTC.

***OTC Processor***

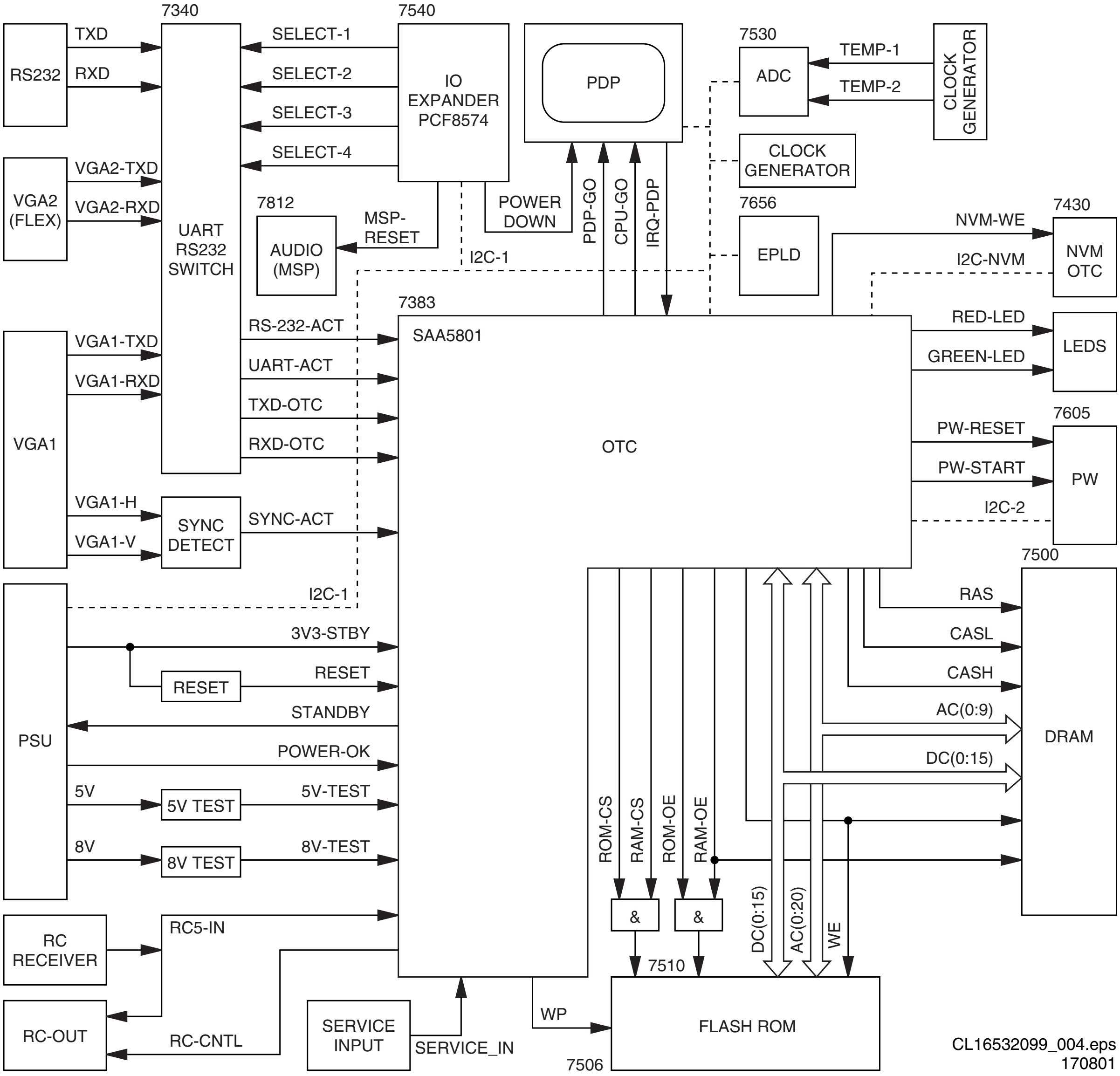
7340
7540
RS232
TXD
RXD
SELECT-1
SELECT-2
SELECT-3
SELECT-4
IO
EXPANDER
PCF8574
PDP
7530
ADC
TEMP-1
TEMP-2
CLOCK
GENERATOR
CLOCK
GENERATOR
VGA2
(FLEX)
VGA2-TXD
VGA2-RXD
UART
RS232
SWITCH
7812
AUDIO
(MSP)
MSP-
RESET
POWER
DOWN
PDP-GO
CPU-GO
IRQ-PDP
I2C-1
7656
EPLD
NVM-WE
7430
I2C-NVM
NVM
OTC
7383
SAA5801
RS-232-ACT
UART-ACT
TXD-OTC
RXD-OTC
RED-LED
GREEN-LED
LEDS
VGA1
VGA1-TXD
VGA1-RXD
OTC
7605
PW-RESET
PW-START
PW
I2C-2
VGA1-H
VGA1-V
SYNC
DETECT
SYNC-ACT
7500
I2C-1
RAS
CASL
CASH
AC(0:9)
DC(0:15)
DRAM
PSU
3V3-STBY
RESET
RESET
STANDBY
POWER-OK
5V
5V TEST
5V-TEST
8V
8V TEST
8V-TEST
ROM-CS
RAM-CS
ROM-OE
RAM-OE
&
&
DC(0:15)
AC(0:20)
WE
7510
RC
RECEIVER
RC5-IN
RC-OUT
RC-CNTL
SERVICE
INPUT
SERVICE_IN
WP
FLASH ROM
7506
CL16532099_004.eps
170801

Figure 9-16 Control Part

This part describes the Main Control part of the SCAVIO panel and the interfaces with the software. The control function consists of the following tasks:

- Control of external IOs, like fan speed, temperature, service and RC5,
- UART communication with Receiver box,
- RS232 control / communication,
- Supports the uploading of new SW into the Flash-ROMs,
- Start-up of monitor and initialisation via I2C,
- Error detection and storing.

***Start-up and Shut-down***

The POR signal is not generated on the PSU, but on the SCAVIO board. This is done with a fully integrated ADM810T POR chip (item 7517), which senses the 3.3 V coming from the PSU. The sense level is 3.08 V. During power-up as well as power-down, this chip will make the RESET signal high. During power-up, this signal will be held "high" until 240 ms after V_cc has become stable.
During power-down, the system will be reset as soon as the V_cc drops below 3.08 V.

### *Start-up from Standby*

When the monitor is in standby mode, it can wake-up in several ways:

- When an RC command is received (RC_IN).
- Detection of H- and/or V-sync on VGA1.
- Detection of UART communication on VGA1.
- Detection of RS232 communication.
- Detection of Service modes.

*RC Command Reception*

When a RC command is received at the RC receiver on the LED panel, it will go directly to the RC input of the OTC (RC_IN on pin 100). If the monitor is in standby, and a proper RC command is send, it will wake up.
The RC commands are routed to the Receiver box via the VGA1 connector pin 9 (RC_VGA1), but this loop through connection is controlled by RC_CNTL. Below is the truth table.

**Table 9-5 RC Commands overview**

| FTV2.1E-box | FTV Monitor | RC commands | RC_CNTL |
|---|---|---|---|
| In Standby | In Standby | Send to E-box | Low |
| In Standby | On | Blocked | High |
| On | In Standby | Send to E-box | Low |
| On | On | Send to E-box | Low |

**Note:** All RC commands are direct available on a separate RC-out cinch connector (RC_OUT) on the VGA connector panel.

*H- and/or V-sync Detection*

When both H and V sync signals are present on VGA1, there is a pulse (low) on SYNC_ACT. When only H is present, SYNC_ACT is continuously low. The SW disables the interrupt, once an interrupt is received.

*UART Communication Detection*

When there is UART communication on VGA1, the UART detection circuitry generates on every falling edge a pulse on UART_ACT. This is a negative going pulse with a width of ± 470 us. The first pulse will trigger the main software to check for the FTV System Protocol (FSP). The SW disables the interrupt, once an interrupt is received.

*RS232 Communication Detection*

When an RS232 connection is made, and communication is started (pulses on RS232_RXD), RS232_ACT becomes "high". Via a transistor, RS232_ACT will make SERVICE_IN low. When the Monitor is operating (+5 V available), this signal is made low (in fact it is disabled).

*Service Mode Detection*

It is possible to enter four different Service Modes (provided the OTC is still supplied by the +3V3_STBY).
Via the SERVICE_IN signal, which is an ADC input of the OTC, a voltage drop is detected from +3.3 V to V_x.
V_x is a DC voltage, which represents the mode to be entered:

**Table 9-6 Service Mode levels**

| Service mode | Limits Vx [V] | Vx [V] | Remarks |
|---|---|---|---|
| SDM | 3.0 > Vx > 2.4 | ± 2.6 | 0382-2 to GND |
| SAM | 2.4 > Vx > 1.8 | ± 2.0 | 0382-4 to GND |
| COMPAIR | 1.8 > Vx > 1.2 | ± 1.4 | 0382-6 to GND |
| RS232 active | Vx < 0.8 | >0.8 | Plug in RS232, start program |

### *I2C*

There are five I2C busses used in the monitor (see also "I2C Overview" in chapter 6):

- I2C bus 1 is a (5 V) device bus, controlled by the OTC, and connected to the following devices:
  - PDP.
  - EPLD.
  - IO expander SCAVIO - PCF8574A.
  - IO expander PSU - PCF8574A.
  - ADC - PCF8591.
  - Clock generator for PW - FS6377.
  - Sound processor MSP3415G.
  - Audio switch TEA6422 (*Enhanced* version only).
- I2C bus 2 is used for communication with the Pixel Works co-processor (PW). Although the OTC is the main controller, it will act in this case as a "slave", since the PW can only act as a "master". Before any I2C commands are exchanged, the PW gets an interrupt (PW_START) to indicate that the OTC wants to talk to the PW.
- I2C bus 3 is a (3.3 V) device bus, controlled by the PW, and connected to the following devices:
  - Video Decoder SAA7118 (*Enhanced* version only).
  - De-interlacer SDA9400 (*Enhanced* version only).
  - ADC/TMDS receiver AD9887.
  - 3D Comb filter MN8783LSI (optional).
- I2C bus 4 is a (3.3 V) bus between the OTC its NVM (to avoid data corruption).
- I2C bus 5 is a (3.3 V) bus between the PW and its NVM (to avoid data corruption).

**Notes:**

- The PDP and EPLD are in fact 3.3 V bus devices, but they need to be connected to bus 1, since the OTC is the first controller to be fully operating at start-up. For this reason, an I2C level shifter (items 7675/76 on diagram SC12) is included, which converts the 5 V signals into 3V3 and visa versa.
- One of the first commands is to set the clock generator (item 7570), else the PW can not start-up.

### *RS232/UART*

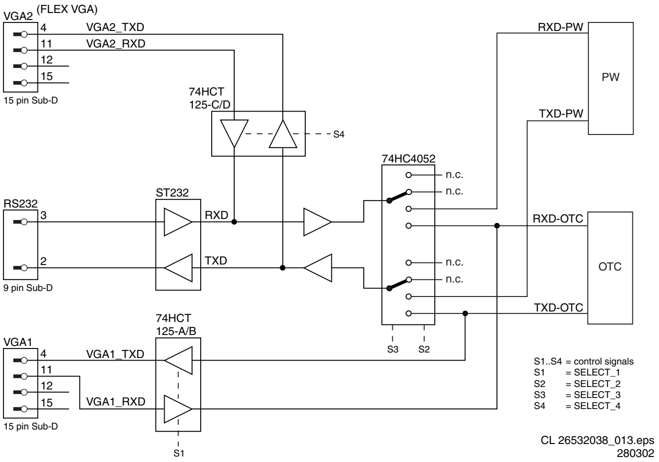

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Figure 9-17 RS232/UART

The FM23 monitor is equipped with an RS232 interface. Via a nine pin Sub-D connector, it is possible to connect a PC for special modes like:

- SW download.
- Factory purposes.
- Service.
- Professional use.

A second option is the connection of a so-called ICONN-box for Institutional TV (Hotel TV).

For communication with the Receiver Box, the UART protocol is used, because this can handle longer cable distances than I2C. The (Receiver box) UART is interfaced via a 15 pin Sub-D connector (VGA connector). Via this UART connection, the F21RE Receiver box and the FM23 Monitor can communicate (via FSP). By doing so, the monitor will know that there is an

Receiver box connected and thus it is operating as a TV configuration.

*RS232/UART Control*
The OTC (SELECT_1 to _4) controls the RS232/UART switches. When the monitor is in Receiver box mode, there is no RS232 communication possible. The monitor is default set in Receiver box mode (switch to n.c. position) and the UART from/to VGA1 is enabled, to allow communication with Receiver box.
If no Receiver box is detected, the UART is disabled to ensure that there will be no communication towards the OTC, and the switch is set to OTC. Below the truth table of the switches is shown, which determine the TXD/RXD path.

**Table 9-7 RS232/UART Control**

| S1= SELECT_1 (P0) | S2 = SELECT_1 (P1) | S3 = SELECT_1 (P3) (3) | S4 = SELECT_4 (P4) (4) | | UART VGA1 (E-box) | UART VGA2 (flex) | RS232 set to OTC (1) | RS232 set to PW (2) |
|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 1 | | 0 | 0 | 0 | 0 |
| 0 | 0 | 1 | 0 | | 0 | 0 | 0 | 0 |
| 0 | 0 | 1 | 1 | | 1 | 0 | 0 | 0 |
| 0 | 1 | 0 | 0 | | 0 | 0 | 0 | 0 |
| 0 | 1 | 0 | 1 | | 0 | 0 | 0 | 0 |
| 0 | 1 | 1 | 0 | | 0 | 0 | 0 | 0 |
| 0 | 1 | 1 | 1 | | 1 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 1 | | 0 | 0 | 1 | 0 |
| 1 | 0 | 1 | 0 | | 0 | 1 | 0 | 0 |
| 1 | 0 | 1 | 1 | | 0 | 0 | 0 | 0 |
| 1 | 1 | 0 | 0 | | 0 | 0 | 0 | 0 |
| 1 | 1 | 0 | 1 | | 0 | 0 | 0 | 1 |
| 1 | 1 | 1 | 0 | | 0 | 1 | 0 | 0 |
| 1 | 1 | 1 | 1 | | 0 | 0 | 0 | 0 |

(1) Software download or ComPair mode.
(2) Software download or Debug mode.
(3) When S3 = 1 the 74HCT4052 is in a tri-state ("off" state).
(4) When S4 = 0 the TXD out of RS232 is disabled (S4 may not become low in any other case).

*UART Detection*
When the VGA1_RXD line is continuously "low", the OTC might run slow due the fact that so-called "break" signals are generated. To prevent this, a small circuitry is added to detect whether VGA1_RXD is continuously "low" (item 7310).
When the VGA1_RXD line is "low" for about 20 ms, the buffer-switch (item 7303-A) is opened. After this buffer, a second discrete buffer is placed (items 7315/16), which keeps the RXD_OTC line "high" and changes the 5 V into a 3.3 V level.

*ICONN-box*
For application of a Flat TV in a hotel environment, the monitor is designed to operate with a so-called ICONN-Box. The ICONN-box will take over the user control of the monitor, by intercepting the RC5-commands coming from a dedicated RC-transmitter, which sends specific hotel-mode commands and sending its own RC-commands to the microprocessor in the monitor.
So in the ICONN-Box, the hotel-mode commands will be converted to RC5-commands, which than can be interpreted by the monitor.
When connected to the RS232 input, this box takes over the control of the IR-receiver in the monitor. It is also able to control the front LED. The switches (7550 for the IR and 7555 for the LED signals) are controlled by the ICONN_NOT signal.

The ICONN-Box shall interface the Monitor with the following signals:

- **IR-RX.** These are the RC5-commands coming from the specific hotel RC5 - transmitter, which are received via the RC5-receiver of the monitor.
- **IR_TX.** These are the RC5-commands generated by the ICONN-Box and send to the monitor.
- **RL_ICN.** Control signal from the microprocessor (of the monitor), indicating the power state of the monitor. The ICONN-Box and monitor LED are driven in parallel.
- **GL_ICN.** Control signal from the microprocessor (of the monitor), indicating the functionality of the monitor, to drive the LED on the ICONN-Box.
- **LD_ICN.** Control signal from the ICONN-Box to drive the green LED on the monitor.

## 9.5 Audio Amplifier Panel (Diagram A)

### 9.5.1 Introduction

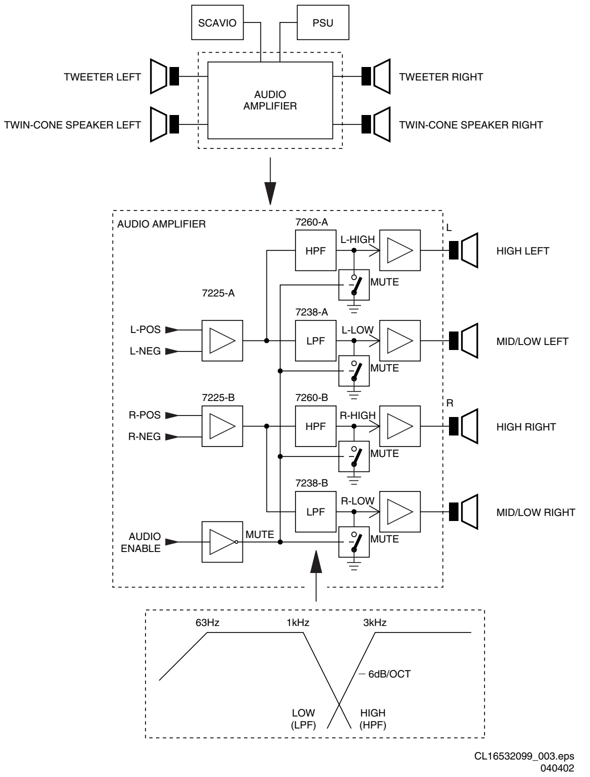


Figure 9-18 Block diagram Audio Amplifier

This panel houses the audio filters and amplifiers necessary for driving the speakers. The differential audio inputs (for common mode immunity) come from the SCAVIO panel (via connector 0388).
The PSU delivers the positive and negative supply voltage of 14.5 V_dc, as well as the +9V_STBY voltage.
After being filtered and amplified, the signals go to the speaker section, where the (twin cone) low/mid range speakers and the tweeters are driven (load impedance is 8 Ω). Shielding of these speaker magnets is not needed for a plasma screen.
Because of the limited space (no room for a bass reflex pipe), the closed box" principle has been chosen. This, in combination with the "Adaptive Ultra Bass 2", results in an acceptable bass performance.

In order to guarantee this good bass performance, the closed box has to be airtight. This is achieved by a closely fitting foam ring between the front and back part of the cabinet.

### 9.5.2 Supply (Diagram A7)

The supply voltage is a symmetrical voltage of +/- 14.5 V_dc, generated by the main supply via L5002.

- V_SND_POS on connector 0302 pin 5/6, and
- V_SND_NEG on connector 0302 pin 1/2.

### 9.5.3 Filter (Diagram A2)

Electrical filtering is needed for following reasons:

- Limiting the cone excursion, thereby reducing the distortion.
- Increasing the power handling capacity (PHC).

In this amplifier panel, active second order Sallen-Key filters are used, with crossover frequencies of 1 kHz for the low pass filter, and 3 kHz for the high pass filter.

The audio signals are filtered **before** the amplifier. There are some reasons for doing this:

- It is now easy to do active filtering, and
- At less costs (no expensive coils and capacitors).

***Low Pass Filter (LPF)***

For L and R separately, a Low Pass Filter (IC7238A and B) is processing L_LOW and R_LOW.
The output signal of this filter is then fed to the audio amplifier (identical for right channel).

***High Pass Filter (HPF)***

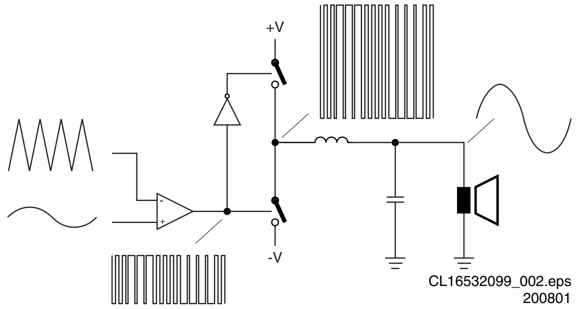
For L and R separately, a High Pass Filter (IC7260A and B) is processing L_HIGH and R_HIGH.
The output signal of this filter is then fed to the audio amplifier (identical for right channel).

### 9.5.4 Amplifier (Diagrams A3 to A6)

Each speaker has its own 15 W class-D amplifier. These so-called SODA (**S**elf **O**scillating class-**D** **A**mplifier) amplifiers combine a good performance with a high efficiency, resulting in a big reduction in heat generation.

***Principle***

Audio-power-amplifier systems have traditionally used linear amplifiers, which are well known for being inefficient. In fact, a linear Class AB amplifier is designed to act as a variable resistor network between the power supply and the load. The transistors operate in their linear region, and the voltage that is dropped across the transistors (in their role as variable resistors) is lost as heat, particularly in the output transistors. Class D amplifiers were developed as a way to increase the efficiency of audio-power-amplifier systems.



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200801

Figure 9-19 Principle Class-D Amplifier

The Class D amplifier works by varying the duty cycle of a Pulse Width Modulated (PWM) signal. By comparing the input voltage to a triangle wave, the amplifier increases duty cycle to increase output voltage, and decreases duty cycle to decrease output voltage.
The output transistors (item 7365 on diagram A3) of a Class D amplifier switch from "full off" to "full on" (saturated) and then back again, spending very little time in the linear region in between. Therefore, very little power is lost to heat. If the transistors have a low "on" resistance (R_DS(ON)), little voltage is dropped across them, further reducing losses.
A Low Pass Filter at the output passes only the average of the output wave, which is an amplified version of the input signal. In order to keep the distortion low, negative feedback is applied (via R3308). A second feedback loop (via R3310) is tapped after the output filter, in order to decrease the distortion at high frequencies.

The **advantage** of Class D is increased efficiency (= less heat dissipation). Class D amplifiers can drive the same output power as a Class AB amplifier using less supply current.
The **disadvantag**e is the large output filter that drives up cost and size. The main reason for this filter is that the switching waveform results in maximum current flow. This causes more loss in the load, which causes lower efficiency. An LC filter with a cut-off frequency less than the Class D switching frequency (350 kHz), allows the switching current to flow through the filter instead of the load. The filter is less lossy than the speaker, which causes less power dissipated at high output power and increases efficiency in most cases.

### 9.5.5 Mute (Diagram A2 to A6)

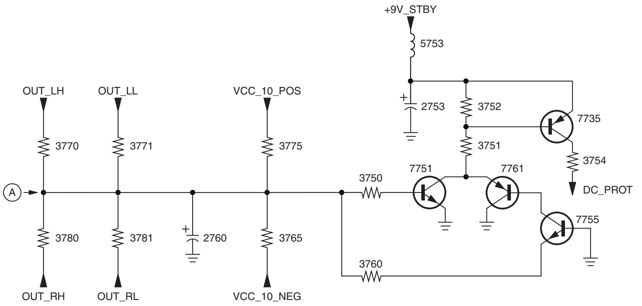
A mute switch (item 7302) is provided at the PWM inputs (item 7315, LM311). This switch is controlled by the AUDIO_ENABLE line, which checks the availability of the +9V_STBY voltage.

### 9.5.6 Protections

***Short-circuit Protection (Diagram A3)***

A protection is made against a too high temperature of transistor 7355 in case of a short-circuit of output FET 7365-1. Transistor 7340 is sensing the current through transistor 7355 via R3355, and activates the DC-protection line (see figure "DC protection") in case the current becomes too high. This is the same for all four amplifier parts.

***DC-protection (Diagram A7)***



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200801

Figure 9-20 DC Protection

Because of the symmetrical supply, a DC-blocking capacitor, between the amplifier and the speaker, is not necessary. However, it is still necessary to protect the speaker for DC voltages.
The following protections are therefore implemented:

- Via R3765 and R3775, each stabilised supply voltage line (via items 7735 and 7745) is checked on deviations.
- Via R3770/3771/3780/3781, each amplifier output is checked for DC-voltage.

Via R3765/3775, a virtual earth is imposed on point A. When one of the supply voltages deviates, a DC voltage will occur on this point. If point A is positive, T7751 will conduct. If it is negative, T7761 will conduct.
Both cases will make T7735 conduct, so that the DC-PROT signal will be made high. This ensures that the power supply is rapidly trimmed back.
Capacitor C2760 will ensure that only DC-signals at point A will activate the protection.

## 9.6 LED/Switch Panel (Diagram LD)

This panel contains:
- The red and green status LEDs,
- The RC input receiver,
- The light sensor, and
- The "on/off" switch.

All signals on this panel come directly from the SCAVIO panel:
- The LED and sensor signals (RED_LED, GREEN_LED and LIGHT_SEN_IN) are routed to the OTC. When a F21RE Receiver box is connected, the sensor signal is routed to the OTC of this box (via UART), where it will control the HOP via I2C.
- The RC signal (RC_IN) is routed to the OTC, the VGA1 connector, and the RC-out cinch connector.
- The signals to (+9V_STBY) and from (+9V_STBY_SW) the "on/off" switch are routed to the PSU board.

## 9.7 Plasma Display Panel (PDP)

### 9.7.1 General

The PDP, which is used in this chassis, is a product of Fujitsu Hitachi Plasma Display Ltd (FHP). When defect, a new panel must be ordered, and after receipt, the defective panel must be send for repair in the packing (flight case) of the new ordered panel.

### 9.7.2 Operation

***Principle***

Plasma displays work by applying a voltage between two transparent display electrodes on the front glass plate of the display. The electrodes are separated by an MgO dielectric layer and surrounded by a mixture of neon and xenon gases. When the voltage reaches the "firing level", a plasma discharge occurs on the surface of the dielectric, resulting in the emission of ultra violet light.
This UV light then excites the phosphor material at the back of the cell and emits visible light. Each cell or sub-pixel has red, blue or green phosphor material and three sub-pixels combine to make up a pixel. The intensity of each colour is controlled by varying the number and width of voltage pulses applied to the sub-pixel during a picture frame. This is implemented by dividing each picture frame into sub-frames. During a sub-frame, all cells are first addressed - those to be lit are pre-charged to a specific address voltage - then during the display time the display voltage is applied to the entire screen lighting those that were addressed.
Each sub-frame has a weighting ranging from 1 time unit to 128 time units for a typical eight sub-frame arrangement (Time Unit depends on size and number of pixels on the screen). This is a purely digital PWM control mechanism, which is a key advantage as it eliminates any unnecessary digital to analogue conversions, making the PDP technology ideal for the all-digital age.

***Achieving High Resolution***

While conventional technology, as found in standard VGA resolution screens, uses 2 display electrodes for each horizontal line, applying the same method to achieve higher resolution (>1000 horizontal lines) brings inherent problems. Firstly, the number of electrodes would need to be doubled which would require very high precision production processes. Secondly, the cell aperture ratio would reduce resulting in lower brightness. In addition, either the driving scheme would have to operate with double the speed, again introducing significantly higher cost, or a dual-scan technique would have to be introduced. With dual-scan, twice as many driving ICs would be required. In summary, implementing high resolution with conventional technology would result in lower brightness and increased costs.

***ALiS Technology***

To achieve high brightness as well as cost-effectiveness, FHP developed ALiS (Alternate Lighting of Surfaces) Technology. ALiS is based on 3 principles:
- Odd and Even lines are displayed separately
- The non-lighting area between the cells is utilised
- The number of electrodes = the number of horizontal display lines + 1

Despite the smaller cell size, the aperture ratio can be increased from 40% to 65% meaning that the screen is inherently brighter. Another spin-off benefit is that the lighting duty is reduced to 50% (odd fields and even fields lit for half of each frame) meaning that a significantly improved phosphor lifetime can be expected.

For more information, see *http://www.fme.fujitsu.com/products/displays/pdp.html*

## 9.8 Abbreviation List

| | |
|---|---|
| ADC | Analogue to Digital Converter |
| ALiS | Alternate Lighting of Surfaces, new plasma display technology |
| AM | Amplitude Modulation |
| AP | Asia Pacific |
| AV | External Audio Video |
| B/G | Monochrome TV system. Sound carrier distance is 5.5 MHz |
| BGA | Ball Grid Array |
| BTSC | Broadcast Television Standard Committee. Multiplex FM stereo sound system, originating from the USA and used e.g. in LATAM and AP-NTSC countries |
| ComPair | Computer aided rePair |
| CVBS | Composite Video Blanking and Synchronisation |
| DAC | Digital to Analogue Converter |
| DDC | Display Data Channel (a protocol based on I2C) |
| D/K | Monochrome TV system. Sound carrier distance is 6.5 MHz |
| DFU | Direction For Use: description for the end user |
| DNR | Dynamic Noise Reduction |
| DRAM | Dynamic RAM |
| DSP | Digital Signal Processing |
| DTS | Digital Theatre Sound |
| DVD | Digital Versatile Disc |
| DVI-d | Digital Visual Interface, d = digital only |
| EEPROM | Electrically Erasable and Programmable Read Only Memory |
| EMI | Electro Magnetic Interference |
| EPLD | Erasable Programmable Logic Device |
| EU | Europe |
| EXT | External (source), entering the set via SCART or Cinch |
| FLASH | Flash memory |
| FM | Frequency Modulation |
| FSP | FTV System Protocol |
| FTV | Flat TeleVision |
| HP | Headphone |
| I | Monochrome TV system. Sound carrier distance is 6.0 MHz |
| I2C | Integrated IC bus |
| I2S | Integrated IC Sound bus |
| ICONN | Institutional CONNector |
| IF | Intermediate Frequency |
| Interlaced | Scan mode where two fields are used to form one frame. Each field contains half the number of the total amount of lines. The fields are written in "pairs", causing line flicker. |
| IR | Infra Red |
| IRQ | Interrupt Request |
| LATAM | Latin America |
| LED | Light Emitting Diode |
| L/L' | Monochrome TV system. Sound carrier distance is 6.5 MHz. L' is Band I, L is all bands except for Band I |
| LS | Loudspeaker |
| LVDS | Low Voltage Differential Signalling |
| M/N | Monochrome TV system. Sound carrier distance is 4.5 MHz |
| MOSFET | Metal Oxide Silicon Field Effect Transistor, switching device |
| MPEG | Motion Pictures Experts Group |
| NC | Not Connected |
| NICAM | Near Instantaneous Compounded Audio Multiplexing. This is a digital sound system, mainly used in Europe. |
| NTC | Negative Temperature Coefficient, non-linear resistor |
| NTSC | National Television Standard Committee. Colour system mainly used in North America and Japan. Colour carrier NTSC M/N = 3.579545 MHz, NTSC 4.43 = 4.433619 MHz (this is a VCR norm, it is not transmitted off-air) |
| NVM | Non Volatile Memory: IC containing TV related data e.g. alignments |
| OC | Open Circuit |
| OSD | On Screen Display |
| OTC | On screen display, Teletext and Control |
| P50 | Project 50 or Easy Link |
| PAL | Phase Alternating Line. Colour system mainly used in West Europe (colour carrier = 4.433619 MHz) and South America (colour carrier PAL M = 3.575612 MHz and PAL N = 3.582056 MHz) |
| PCB | Printed Circuit Board |
| PCM | Pulse Code Modulation |
| PDP | Plasma Display Panel |
| PFC | Power Factor Corrector (or Pre-conditioner) |
| PIP | Picture In Picture |
| PLL | Phase Locked Loop. Used for e.g. FST tuning systems. The customer can give directly the desired frequency |
| POR | Power On Reset, signal to reset the P |
| Progressive Scan | Scan mode, where all scan lines are displayed in one frame at the same time, creating a double vertical resolution. |
| PTC | Positive Temperature Coefficient, non linear resistor |
| PW | Pixel Works (manufacturer) video scaling co-processor |
| PWM | Pulse Width Modulation |
| RAM | Random Access Memory |
| RC | Remote Control handset |
| RC5 | Remote Control system 5, signal from the remote control receiver |
| RGB | Red Green Blue |
| ROM | Read Only Memory |
| SCART | Syndicat des Constructeurs d'Appareils Radiorecepteurs et Televisieurs |
| SCAVIO | Scaler Control Audio Video Input and Output |
| SCL | Serial Clock I2C |
| SDA | Serial Data I2C |
| SDRAM | Synchronous DRAM |
| SECAM | SEequence Couleur Avec Memoire. Colour system mainly used in France and East Europe. Colour carriers = 4.406250 MHz and 4.250000 MHz |
| SMPS | Switched Mode Power Supply |
| SOG | Sync On Green |
| SOPS | Self Oscillating Power Supply |
| S/PDIF | Sony Philips Digital InterFace |
| SRAM | Static RAM |
| STBY | Standby |
| SVHS | Super Video Home System |
| SW | Software |
| SXGA | 1280x1024 |
| THD | Total Harmonic Distortion |
| TMDS | Transition Minimised Differential Signalling |
| TXT | Teletext |
| UART | Universal Asynchronous Receiver Transmitter, 2-wire bus which can handle longer cables than I2C. |

| | |
|---|---|
| P | Microprocessor |
| VCR | Video Cassette Recorder |
| V_a | Addressing voltage for the plasma display |
| V_ra | Setting voltage for V_a |
| V_rs | Setting voltage for V_s |
| V_s | Sustain voltage for the plasma display |
| Y/C | Luminance (Y) and Chrominance (C) signal |
| YUV | Component video |
| 0/6/12 | SCART switch control signal on A/V board. 0 = loop through (AUX to TV), 6 = play 16:9 format, 12 = play 4:3 format |

## 9.9 IC Data

In this paragraph, the internal block diagrams and pinning are given of ICs that are drawn as a "black box" in the electrical diagrams (with exception of "memory" and "logic" ICs).

### 9.9.1 Diagram P2, TNY256 (IC7500)

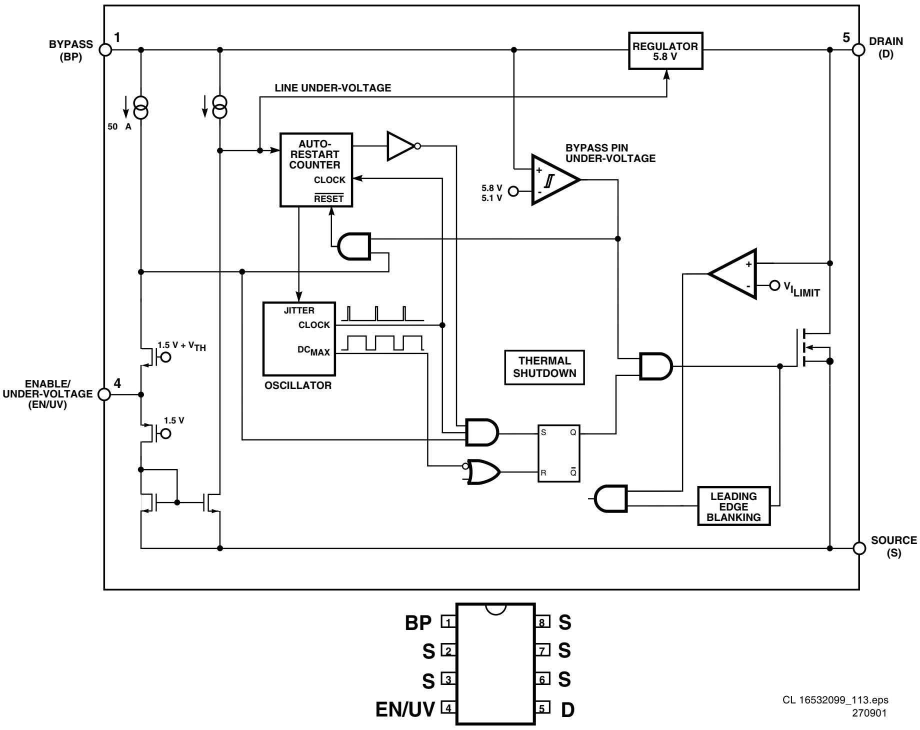
BYPASS (BP)
1
50 A
LINE UNDER-VOLTAGE
REGULATOR 5.8 V
5
DRAIN (D)
AUTO-RESTART COUNTER
CLOCK
RESET
BYPASS PIN UNDER-VOLTAGE
5.8 V
5.1 V
$V_{I_{LIMIT}}$
JITTER
CLOCK
$DC_{MAX}$
OSCILLATOR
1.5 V + $V_{TH}$
ENABLE/ UNDER-VOLTAGE (EN/UV)
4
1.5 V
THERMAL SHUTDOWN
S
Q
R
LEADING EDGE BLANKING
SOURCE (S)
BP 1
S 2
S 3
EN/UV 4
8 S
7 S
6 S
5 D

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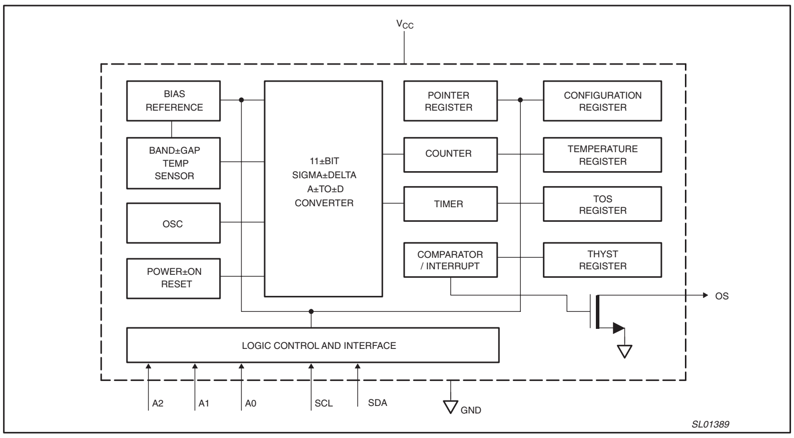
**Figure 9-21 Internal block diagram and pinning**

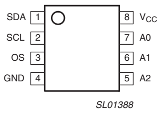
### 9.9.2 Diagram P3, LM75A (IC7372)

**SIMPLIFIED BLOCK DIAGRAM**


$V_{CC}$
BIAS REFERENCE
BAND±GAP TEMP SENSOR
OSC
POWER±ON RESET
11±BIT SIGMA±DELTA A±TO±D CONVERTER
POINTER REGISTER
COUNTER
TIMER
COMPARATOR / INTERRUPT
CONFIGURATION REGISTER
TEMPERATURE REGISTER
TOS REGISTER
THYST REGISTER
OS
LOGIC CONTROL AND INTERFACE
A2
A1
A0
SCL
SDA
GND
SL01389

**PINNING**

**Pin configuration**


SDA 1
SCL 2
OS 3
GND 4
8 $V_{CC}$
7 A0
6 A1
5 A2
SL01388

**Pin description**

| PIN | SYMBOL | DESCRIPTION |
|---|---|---|
| 1 | SDA | Digital I/O. $I^2C$ serial bi-directional data line. Open Drain. |
| 2 | SCL | Digital input. $I^2C$ serial clock input. |
| 3 | OS | Overtemp Shutdown output. Open Drain. |
| 4 | GND | Ground. To be connected to the system ground. |
| 5 | A2 | Digital input. User-defined address bit2. |
| 6 | A1 | Digital input. User-defined address bit1. |
| 7 | A0 | Digital input. User-defined address bit0. |
| 8 | $V_{CC}$ | Power supply. |

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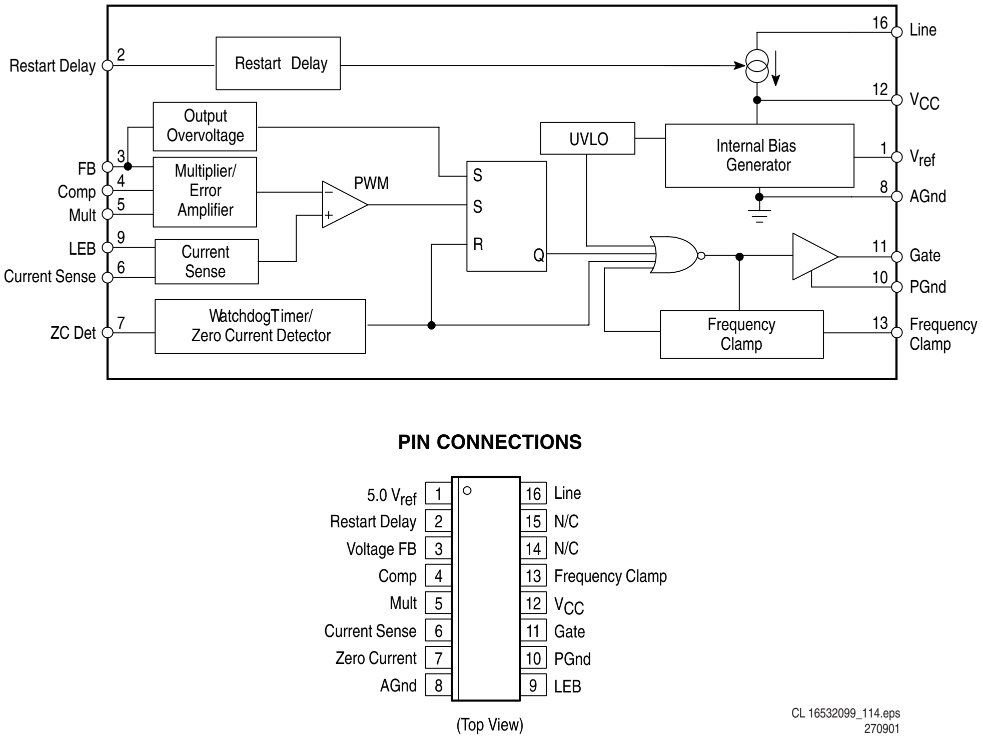
030703

**Figure 9-22 Internal block diagram and pinning**

### 9.9.3 Diagram P5, MC33368 (IC7650)


Restart Delay
2
Restart Delay
16
Line
12
VCC
Output Overvoltage
UVLO
Internal Bias Generator
1
Vref
8
AGnd
FB
3
4
Comp
5
Mult
Multiplier/ Error Amplifier
PWM
S
S
R
Q
LEB
9
6
Current Sense
Current Sense
11
Gate
10
PGnd
ZC Det
7
WatchdogTimer/ Zero Current Detector
Frequency Clamp
13
Frequency Clamp
PIN CONNECTIONS
5.0 Vref 1
Restart Delay 2
Voltage FB 3
Comp 4
Mult 5
Current Sense 6
Zero Current 7
AGnd 8
16 Line
15 N/C
14 N/C
13 Frequency Clamp
12 VCC
11 Gate
10 PGnd
9 LEB
(Top View)
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270901

**Figure 9-23 Internal block diagram and pinning**

### 9.9.4 Diagram P7, TEA1507 (IC7112 and IC7212)

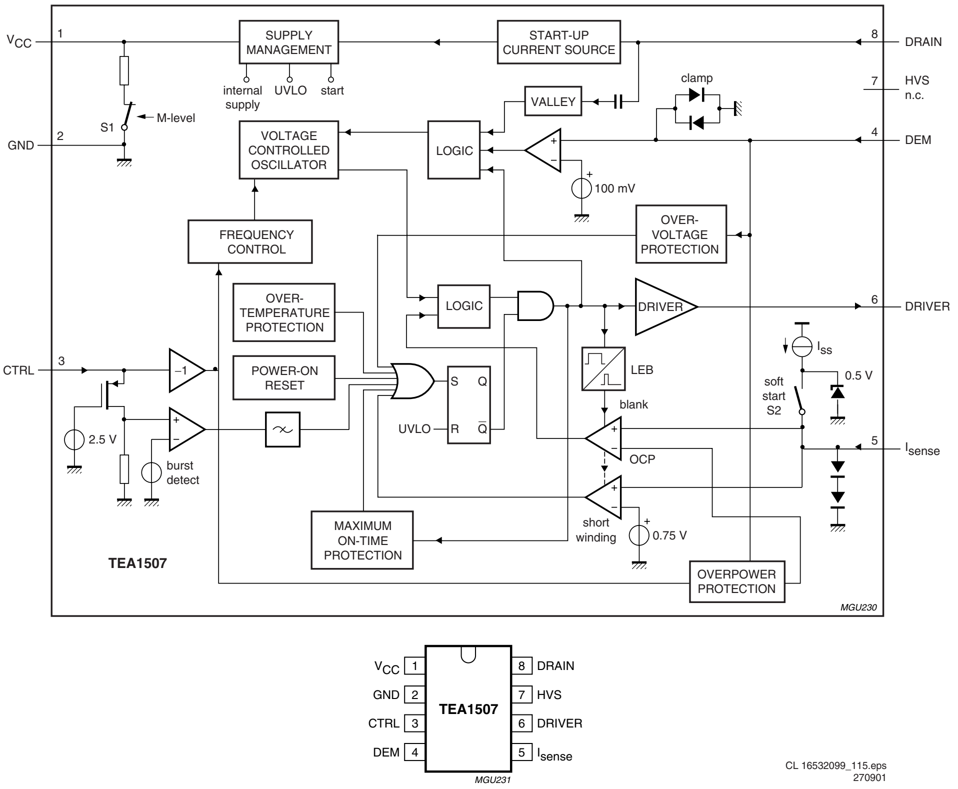
VCC
1
GND
2
CTRL
3
S1
M-level
SUPPLY MANAGEMENT
internal supply
UVLO
start
START-UP CURRENT SOURCE
8
DRAIN
7
HVS n.c.
VALLEY
clamp
4
DEM
VOLTAGE CONTROLLED OSCILLATOR
LOGIC
100 mV
FREQUENCY CONTROL
OVER-VOLTAGE PROTECTION
OVER-TEMPERATURE PROTECTION
LOGIC
DRIVER
6
DRIVER
POWER-ON RESET
−1
S
Q
R
Q̄
UVLO
LEB
blank
Iss
soft start S2
0.5 V
2.5 V
burst detect
OCP
5
Isense
short winding
0.75 V
MAXIMUM ON-TIME PROTECTION
TEA1507
OVERPOWER PROTECTION
MGU230
VCC 1
GND 2
CTRL 3
DEM 4
TEA1507
8 DRAIN
7 HVS
6 DRIVER
5 Isense
MGU231
CL 16532099_115.eps
270901

**Figure 9-24 Internal Block Diagram and pinning TEA1507**

### 9.9.5 Diagram P7, L4973V (IC7260)

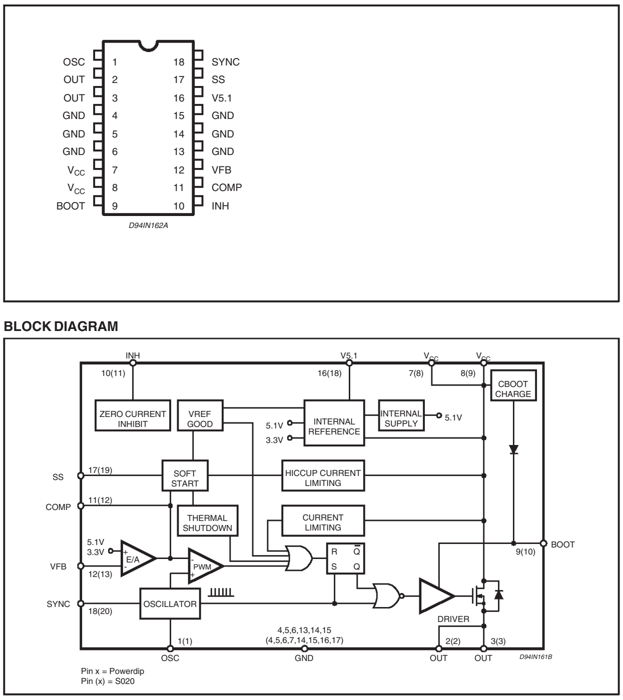
OSC 1
OUT 2
OUT 3
GND 4
GND 5
GND 6
$V_{CC}$ 7
$V_{CC}$ 8
BOOT 9
18 SYNC
17 SS
16 V5.1
15 GND
14 GND
13 GND
12 VFB
11 COMP
10 INH
D94IN162A
BLOCK DIAGRAM
INH
10(11)
V5.1
16(18)
$V_{CC}$
7(8)
$V_{CC}$
8(9)
CBOOT CHARGE
ZERO CURRENT INHIBIT
VREF GOOD
5.1V
3.3V
INTERNAL REFERENCE
INTERNAL SUPPLY
5.1V
SS
17(19)
SOFT START
HICCUP CURRENT LIMITING
COMP
11(12)
THERMAL SHUTDOWN
CURRENT LIMITING
5.1V
3.3V
E/A
PWM
R
Q̄
S
Q
BOOT
9(10)
VFB
12(13)
SYNC
18(20)
OSCILLATOR
DRIVER
4,5,6,13,14,15
(4,5,6,7,14,15,16,17)
1(1)
2(2)
3(3)
OSC
GND
OUT
OUT
D94IN161B
Pin x = Powerdip
Pin (x) = S020

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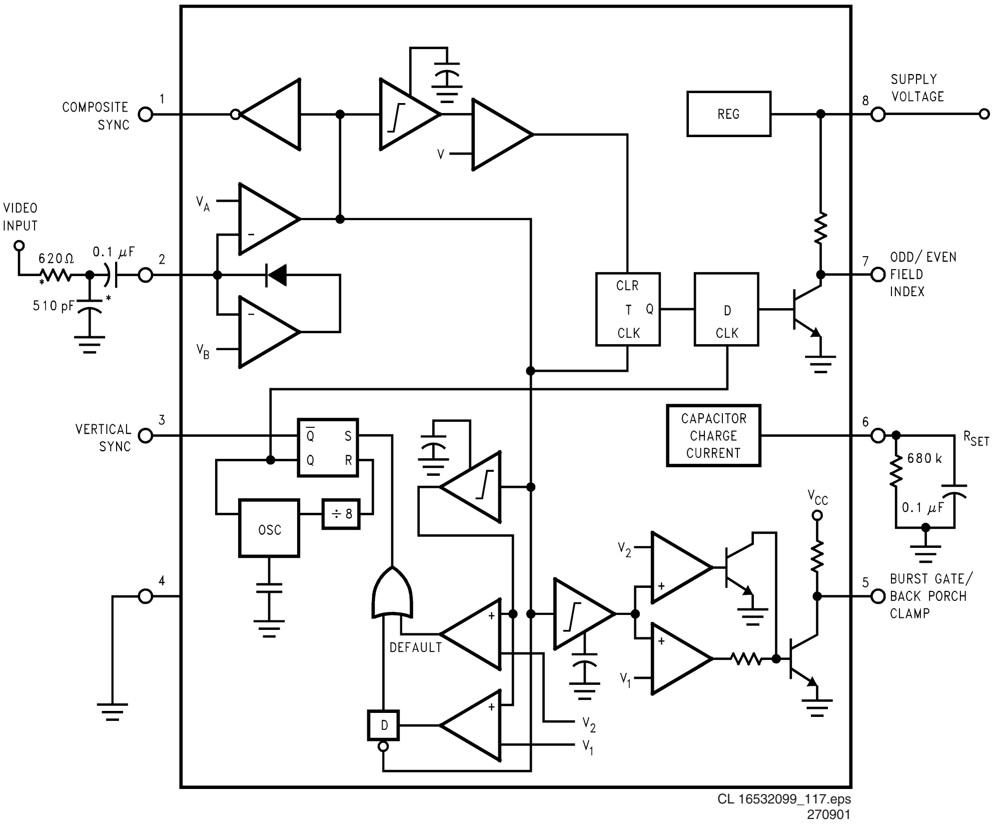
Figure 9-25 Internal Block Diagram and pinning L4973

### 9.9.6 Diagram SC2, LM1881M (7040)


COMPOSITE SYNC
1
V
REG
8
SUPPLY VOLTAGE
VIDEO INPUT
$V_A$
620Ω
0.1 μF
2
510 pF
*
*
$V_B$
CLR
T Q
CLK
D
CLK
7
ODD/ EVEN FIELD INDEX
VERTICAL SYNC
3
Q̄
S
Q
R
CAPACITOR CHARGE CURRENT
6
$R_{SET}$
680 k
0.1 μF
OSC
÷ 8
$V_{CC}$
$V_2$
4
5
BURST GATE/ BACK PORCH CLAMP
DEFAULT
$V_1$
D
$V_2$
$V_1$

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270901

Figure 9-26 Internal Block Diagram and pinning LM1881

### 9.9.7 Diagram SP2, PCF8591 (7530)

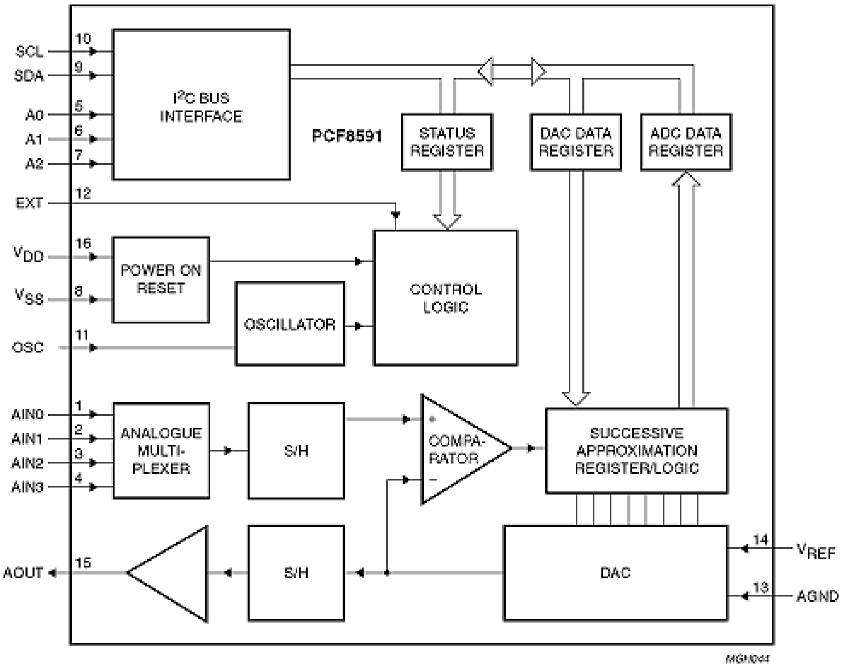
SCL
SDA
A0
A1
A2
EXT
VDD
VSS
OSC
AIN0
AIN1
AIN2
AIN3
AOUT
10
9
5
6
7
12
16
8
11
1
2
3
4
15
14
13
I2C BUS INTERFACE
PCF8591
STATUS REGISTER
DAC DATA REGISTER
ADC DATA REGISTER
POWER ON RESET
OSCILLATOR
CONTROL LOGIC
ANALOGUE MULTI-PLEXER
S/H
COMPA-RATOR
+
−
SUCCESSIVE APPROXIMATION REGISTER/LOGIC
S/H
DAC
VREF
AGND
MGM044

Figure 9-27 Internal Block Diagram PCF8591

# 10. Spare Parts List

## Audio Panel [A]

### Various

| | | |
|---|---|---|
| 0302 | 2422 025 16846 | Connector 9P m h |
| 0303 | 2422 025 16702 | Connector 5P m h |
| 0304 | 2422 025 16543 | Connector 4P m |
| 0388 | 2422 025 16703 | Connector 7P m |
| 0388 | 2422 025 16704 | Connector 8P m |
| 1730 | 4822 071 52502 | Fuse 2.5A |
| 1730 | 4822 253 50137 | Fuse 2.5A |
| 1740 | 4822 071 52502 | Fuse 2.5A |
| 1740 | 4822 253 50137 | Fuse 2.5A |

⊣⊢

| | | |
|---|---|---|
| 2201 | 4822 126 13193 | 4.7nF 10% 63V |
| 2202 | 4822 124 23002 | 10µF 20% 16V |
| 2204 | 4822 126 14226 | 82pF 5% 50V 0603 |
| 2205 | 4822 126 13193 | 4.7nF 10% 63V |
| 2206 | 4822 124 23002 | 10µF 20% 16V |
| 2207 | 4822 126 14226 | 82pF 5% 50V 0603 |
| 2212 | 5322 126 11578 | 1nF 10% 50V 0603 |
| 2215 | 4822 126 13193 | 4.7nF 10% 63V |
| 2216 | 4822 124 23002 | 10µF 20% 16V |
| 2218 | 4822 126 14226 | 82pF 5% 50V 0603 |
| 2220 | 4822 126 13193 | 4.7nF 10% 63V |
| 2221 | 4822 124 23002 | 10µF 20% 16V |
| 2222 | 4822 126 14226 | 82pF 5% 50V 0603 |
| 2224 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2224 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2225 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2225 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2233 | 2020 552 96325 | 25V 68nF 10% |
| 2233 | 3198 017 31530 | 15nF 20% 50V 0603 |
| 2233 | 3198 017 36830 | 68nF 10% 16V 0603 |
| 2233 | 5322 126 11582 | 6.8nF 10% 63V |
| 2234 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2234 | 3198 017 31530 | 15nF 20% 50V 0603 |
| 2234 | 4822 126 14494 | 22nF 10% 25V 0603 |
| 2238 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2238 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2239 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2239 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2243 | 2020 552 96325 | 25V 68nF 10% |
| 2243 | 3198 017 31530 | 15nF 20% 50V 0603 |
| 2243 | 3198 017 36830 | 68nF 10% 16V 0603 |
| 2243 | 5322 126 11582 | 6.8nF 10% 63V |
| 2244 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2244 | 3198 017 31530 | 15nF 20% 50V 0603 |
| 2244 | 4822 126 14494 | 22nF 10% 25V 0603 |
| 2255 | 4822 126 13193 | 4.7nF 10% 63V |
| 2255 | 4822 126 14494 | 22nF 10% 25V 0603 |
| 2256 | 4822 126 13193 | 4.7nF 10% 63V |
| 2256 | 4822 126 14494 | 22nF 10% 25V 0603 |
| 2260 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2260 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2261 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2261 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2270 | 4822 126 13193 | 4.7nF 10% 63V |
| 2270 | 4822 126 14494 | 22nF 10% 25V 0603 |
| 2271 | 4822 126 13193 | 4.7nF 10% 63V |
| 2271 | 4822 126 14494 | 22nF 10% 25V 0603 |
| 2309 | 4822 126 14247 | 1.5nF 50V 0603 |
| 2310 | 4822 126 14226 | 82pF 5% 50V 0603 |
| 2315 | 4822 124 12084 | 1µF 20% 50V |
| 2315 | 4822 124 23002 | 10µF 20% 16V |
| 2316 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2316 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2318 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2318 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2319 | 4822 124 12084 | 1µF 20% 50V |
| 2319 | 4822 124 23002 | 10µF 20% 16V |
| 2330 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2330 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2334 | 2020 012 93764 | 220µF 20% 35V |
| 2335 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2335 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2340 | 5322 126 11583 | 10nF 10% 50V 0603 |
| 2355 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2355 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2359 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2359 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2360 | 2020 012 93764 | 220µF 20% 35V |
| 2365 | 2020 552 96326 | 220nF 10% 16V |
| 2366 | 2020 552 96326 | 220nF 10% 16V |
| 2409 | 4822 126 14247 | 1.5nF 50V 0603 |
| 2410 | 4822 126 14226 | 82pF 5% 50V 0603 |
| 2415 | 4822 124 12084 | 1µF 20% 50V |
| 2415 | 4822 124 23002 | 10µF 20% 16V |
| 2416 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2416 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2418 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2418 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2419 | 4822 124 12084 | 1µF 20% 50V |
| 2419 | 4822 124 23002 | 10µF 20% 16V |
| 2430 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2430 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2434 | 2020 012 93764 | 220µF 20% 35V |
| 2435 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2435 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2440 | 5322 126 11583 | 10nF 10% 50V 0603 |
| 2455 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2455 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2459 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2459 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2460 | 2020 012 93764 | 220µF 20% 35V |
| 2465 | 2020 552 96326 | 220nF 10% 16V |
| 2466 | 2020 552 96326 | 220nF 10% 16V |
| 2509 | 4822 126 14247 | 1.5nF 50V 0603 |
| 2510 | 4822 126 14226 | 82pF 5% 50V 0603 |
| 2515 | 4822 124 12084 | 1µF 20% 50V |
| 2515 | 4822 124 23002 | 10µF 20% 16V |
| 2516 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2516 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2518 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2518 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2519 | 4822 124 12084 | 1µF 20% 50V |
| 2519 | 4822 124 23002 | 10µF 20% 16V |
| 2530 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2530 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2534 | 2020 012 93764 | 220µF 20% 35V |
| 2535 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2535 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2540 | 5322 126 11583 | 10nF 10% 50V 0603 |
| 2555 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2555 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2559 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2559 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2560 | 2020 012 93764 | 220µF 20% 35V |
| 2565 | 2020 552 96326 | 220nF 10% 16V |
| 2566 | 2020 552 96326 | 220nF 10% 16V |
| 2609 | 4822 126 14247 | 1.5nF 50V 0603 |
| 2610 | 4822 126 14226 | 82pF 5% 50V 0603 |
| 2615 | 4822 124 12084 | 1µF 20% 50V |
| 2615 | 4822 124 23002 | 10µF 20% 16V |
| 2616 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2616 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2618 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2618 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2619 | 4822 124 12084 | 1µF 20% 50V |
| 2619 | 4822 124 23002 | 10µF 20% 16V |
| 2630 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2630 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2634 | 2020 012 93764 | 220µF 20% 35V |
| 2635 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2635 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2640 | 5322 126 11583 | 10nF 10% 50V 0603 |
| 2655 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2655 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2659 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2659 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2660 | 2020 012 93764 | 220µF 20% 35V |
| 2665 | 2020 552 96326 | 220nF 10% 16V |
| 2666 | 2020 552 96326 | 220nF 10% 16V |
| 2730 | 2020 012 93764 | 220µF 20% 35V |
| 2732 | 2020 012 93764 | 220µF 20% 35V |
| 2733 | 4822 124 23002 | 10µF 20% 16V |
| 2734 | 4822 124 12084 | 1µF 20% 50V |
| 2734 | 4822 124 23002 | 10µF 20% 16V |
| 2740 | 2020 012 93764 | 220µF 20% 35V |
| 2742 | 2020 012 93764 | 220µF 20% 35V |
| 2743 | 4822 124 23002 | 10µF 20% 16V |
| 2744 | 4822 124 12084 | 1µF 20% 50V |
| 2744 | 4822 124 23002 | 10µF 20% 16V |
| 2752 | 4822 124 23002 | 10µF 20% 16V |
| 2753 | 4822 124 23002 | 10µF 20% 16V |
| 2759 | 5322 126 11578 | 1nF 10% 50V 0603 |
| 2760 | 5322 124 41945 | 22µF 20% 35V |
| 2770 | 5322 126 11578 | 1nF 10% 50V 0603 |
| 2771 | 5322 126 11578 | 1nF 10% 50V 0603 |
| 2780 | 5322 126 11578 | 1nF 10% 50V 0603 |
| 2781 | 5322 126 11578 | 1nF 10% 50V 0603 |
| 2799 | 5322 126 11583 | 10nF 10% 50V 0603 |

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|---|---|---|
| 3201 | 4822 051 30221 | 220Ω 5% 0.062W |
| 3202 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3203 | 4822 051 30272 | 2.7kΩ 5% 0.062W |
| 3203 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3205 | 4822 051 30221 | 220Ω 5% 0.062W |
| 3206 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3207 | 4822 051 30272 | 2.7kΩ 5% 0.062W |
| 3207 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3210 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3211 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3215 | 4822 051 30221 | 220Ω 5% 0.062W |
| 3216 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3217 | 4822 051 30272 | 2.7kΩ 5% 0.062W |
| 3217 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3220 | 4822 051 30221 | 220Ω 5% 0.062W |
| 3221 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3222 | 4822 051 30272 | 2.7kΩ 5% 0.062W |
| 3222 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3230 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3231 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3231 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3232 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3232 | 4822 051 30152 | 1.5kΩ 5% 0.062W |
| 3232 | 4822 051 30682 | 6.8kΩ 5% 0.062W |
| 3233 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3233 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3234 | 4822 051 30272 | 2.7kΩ 5% 0.062W |
| 3234 | 4822 051 30561 | 560Ω 5% 0.062W |
| 3234 | 4822 117 12917 | 1Ω 5% 0.062W 0603 |
| 3240 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3241 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3241 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3242 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3242 | 4822 051 30152 | 1.5kΩ 5% 0.062W |
| 3242 | 4822 051 30682 | 6.8kΩ 5% 0.062W |
| 3243 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3243 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3244 | 4822 051 30272 | 2.7kΩ 5% 0.062W |
| 3244 | 4822 051 30561 | 560Ω 5% 0.062W |
| 3244 | 4822 117 12917 | 1Ω 5% 0.062W 0603 |
| 3255 | 4822 051 30562 | 5.6kΩ 5% 0.063W 0603 |
| 3255 | 4822 117 11817 | 1.2kΩ 1% 1/16W |
| 3256 | 4822 051 30153 | 15kΩ 5% 0.062W |
| 3256 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3257 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3257 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3259 | 4822 117 12917 | 1Ω 5% 0.062W 0603 |
| 3270 | 4822 051 30562 | 5.6kΩ 5% 0.063W 0603 |
| 3270 | 4822 117 11817 | 1.2kΩ 1% 1/16W |
| 3271 | 4822 051 30153 | 15kΩ 5% 0.062W |
| 3271 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3272 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3272 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3274 | 4822 117 12917 | 1Ω 5% 0.062W 0603 |
| 3301 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3301 | 4822 117 12902 | 8.2kΩ 1% 0.063W 0603 |
| 3302 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3302 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3303 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3304 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3306 | 4822 117 12902 | 8.2kΩ 1% 0.063W 0603 |
| 3306 | 4822 117 12903 | 1.8kΩ 1% 0.063W 0603 |
| 3307 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3308 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3309 | 4822 051 30181 | 180Ω 5% 0.062W |
| 3310 | 4822 117 12864 | 82kΩ 5% 0.6W |
| 3311 | 4822 051 30682 | 6.8kΩ 5% 0.062W |
| 3311 | 4822 117 12917 | 1Ω 5% 0.062W 0603 |
| 3315 | 5322 117 11726 | 10Ω 5% |
| 3318 | 5322 117 11726 | 10Ω 5% |
| 3325 | 4822 117 11449 | 2.2kΩ 5% 0.1W 0805 |
| 3327 | 4822 117 11449 | 2.2kΩ 5% 0.1W 0805 |
| 3328 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3330 | 5322 117 11726 | 10Ω 5% |
| 3336 | 4822 051 30475 | 4.7MΩ 5% 0.062W 0603 |
| 3336 | 4822 117 12891 | 220kΩ 1% 0.063W 0603 |
| 3337 | 5322 117 11726 | 10Ω 5% |
| 3340 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3355 | 5322 117 11726 | 10Ω 5% |
| 3361 | 4822 051 30475 | 4.7MΩ 5% 0.062W 0603 |
| 3361 | 4822 117 12891 | 220kΩ 1% 0.063W 0603 |
| 3362 | 5322 117 11726 | 10Ω 5% |
| 3401 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3401 | 4822 117 12902 | 8.2kΩ 1% 0.063W 0603 |
| 3402 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3402 | 4822 051 30472 | 4.7kΩ 5% 0.062W |

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|---|---|---|
| 3403 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3404 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3406 | 4822 117 12902 | 8.2kΩ 1% 0.063W 0603 |
| 3406 | 4822 117 12903 | 1.8kΩ 1% 0.063W 0603 |
| 3407 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3408 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3409 | 4822 051 30181 | 180Ω 5% 0.062W |
| 3410 | 4822 117 12864 | 82kΩ 5% 0.6W |
| 3411 | 4822 051 30153 | 15kΩ 5% 0.062W |
| 3415 | 5322 117 11726 | 10Ω 5% |
| 3418 | 5322 117 11726 | 10Ω 5% |
| 3425 | 4822 117 11449 | 2.2kΩ 5% 0.1W 0805 |
| 3427 | 4822 117 11449 | 2.2kΩ 5% 0.1W 0805 |
| 3428 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3430 | 5322 117 11726 | 10Ω 5% |
| 3436 | 4822 051 30475 | 4.7MΩ 5% 0.062W 0603 |
| 3436 | 4822 117 12891 | 220kΩ 1% 0.063W 0603 |
| 3437 | 5322 117 11726 | 10Ω 5% |
| 3440 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3455 | 5322 117 11726 | 10Ω 5% |
| 3461 | 4822 051 30475 | 4.7MΩ 5% 0.062W 0603 |
| 3461 | 4822 117 12891 | 220kΩ 1% 0.063W 0603 |
| 3462 | 5322 117 11726 | 10Ω 5% |
| 3501 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3501 | 4822 117 12902 | 8.2kΩ 1% 0.063W 0603 |
| 3502 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3502 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3503 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3504 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3506 | 4822 117 12902 | 8.2kΩ 1% 0.063W 0603 |
| 3506 | 4822 117 12903 | 1.8kΩ 1% 0.063W 0603 |
| 3507 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3508 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3509 | 4822 051 30181 | 180Ω 5% 0.062W |
| 3510 | 4822 117 12864 | 82kΩ 5% 0.6W |
| 3511 | 4822 051 30682 | 6.8kΩ 5% 0.062W |
| 3515 | 5322 117 11726 | 10Ω 5% |
| 3518 | 5322 117 11726 | 10Ω 5% |
| 3525 | 4822 117 11449 | 2.2kΩ 5% 0.1W 0805 |
| 3527 | 4822 117 11449 | 2.2kΩ 5% 0.1W 0805 |
| 3528 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3530 | 5322 117 11726 | 10Ω 5% |
| 3536 | 4822 051 30475 | 4.7MΩ 5% 0.062W 0603 |
| 3536 | 4822 117 12891 | 220kΩ 1% 0.063W 0603 |
| 3537 | 5322 117 11726 | 10Ω 5% |
| 3540 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3555 | 5322 117 11726 | 10Ω 5% |
| 3561 | 4822 051 30475 | 4.7MΩ 5% 0.062W 0603 |
| 3561 | 4822 117 12891 | 220kΩ 1% 0.063W 0603 |
| 3562 | 5322 117 11726 | 10Ω 5% |
| 3601 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3601 | 4822 117 12902 | 8.2kΩ 1% 0.063W 0603 |
| 3602 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3602 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3603 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3604 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3606 | 4822 117 12902 | 8.2kΩ 1% 0.063W 0603 |
| 3606 | 4822 117 12903 | 1.8kΩ 1% 0.063W 0603 |
| 3607 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3608 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3609 | 4822 051 30181 | 180Ω 5% 0.062W |
| 3610 | 4822 117 12864 | 82kΩ 5% 0.6W |
| 3611 | 4822 051 30153 | 15kΩ 5% 0.062W |
| 3611 | 4822 051 30223 | 22kΩ 5% 0.062W |
| 3615 | 5322 117 11726 | 10Ω 5% |
| 3618 | 5322 117 11726 | 10Ω 5% |
| 3625 | 4822 117 11449 | 2.2kΩ 5% 0.1W 0805 |
| 3627 | 4822 117 11449 | 2.2kΩ 5% 0.1W 0805 |
| 3628 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3630 | 5322 117 11726 | 10Ω 5% |
| 3636 | 4822 051 30475 | 4.7MΩ 5% 0.062W 0603 |
| 3636 | 4822 117 12891 | 220kΩ 1% 0.063W 0603 |
| 3637 | 5322 117 11726 | 10Ω 5% |
| 3640 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3655 | 5322 117 11726 | 10Ω 5% |
| 3661 | 4822 051 30475 | 4.7MΩ 5% 0.062W 0603 |
| 3661 | 4822 117 12891 | 220kΩ 1% 0.063W 0603 |
| 3662 | 5322 117 11726 | 10Ω 5% |
| 3732 | 4822 051 30152 | 1.5kΩ 5% 0.062W |
| 3732 | 4822 051 30272 | 2.7kΩ 5% 0.062W |
| 3733 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3733 | 4822 051 30221 | 220Ω 5% 0.062W |
| 3742 | 4822 051 30152 | 1.5kΩ 5% 0.062W |
| 3742 | 4822 051 30272 | 2.7kΩ 5% 0.062W |
| 3743 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3743 | 4822 051 30221 | 220Ω 5% 0.062W |
| 3749 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3750 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3751 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3752 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3754 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3755 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3760 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3765 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3770 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3771 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3780 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3781 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |

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|---|---|---|
| 5335 | 4822 157 11717 | BLM31P500SPT |
| 5360 | 4822 157 11717 | BLM31P500SPT |
| 5365 | 2422 536 00338 | 33µH 10% SMD 10mm |
| 5435 | 4822 157 11717 | BLM31P500SPT |
| 5460 | 4822 157 11717 | BLM31P500SPT |
| 5465 | 2422 536 00338 | 33µH 10% SMD 10mm |
| 5535 | 4822 157 11717 | BLM31P500SPT |
| 5560 | 4822 157 11717 | BLM31P500SPT |
| 5565 | 2422 536 00338 | 33µH 10% SMD 10mm |
| 5635 | 4822 157 11717 | BLM31P500SPT |
| 5660 | 4822 157 11717 | BLM31P500SPT |
| 5665 | 2422 536 00338 | 33µH 10% SMD 10mm |
| 5714 | 4822 157 11717 | BLM31P500SPT |
| 5719 | 4822 157 11717 | BLM31P500SPT |
| 5725 | 4822 157 11717 | BLM31P500SPT |
| 5753 | 2422 549 43769 | Bead 30Ω at 100MHz |

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|---|---|---|
| 6328 | 4822 130 11397 | BAS316 |
| 6334 | 4822 130 11148 | UDZ4.7B |
| 6335 | 4822 130 11148 | UDZ4.7B |
| 6355 | 4822 130 11148 | UDZ4.7B |
| 6356 | 4822 130 11148 | UDZ4.7B |
| 6359 | 4822 130 11148 | UDZ4.7B |
| 6360 | 4822 130 11148 | UDZ4.7B |
| 6428 | 4822 130 11397 | BAS316 |
| 6434 | 4822 130 11148 | UDZ4.7B |
| 6435 | 4822 130 11148 | UDZ4.7B |
| 6455 | 4822 130 11148 | UDZ4.7B |
| 6456 | 4822 130 11148 | UDZ4.7B |
| 6459 | 4822 130 11148 | UDZ4.7B |
| 6460 | 4822 130 11148 | UDZ4.7B |
| 6528 | 4822 130 11397 | BAS316 |
| 6534 | 4822 130 11148 | UDZ4.7B |
| 6535 | 4822 130 11148 | UDZ4.7B |
| 6555 | 4822 130 11148 | UDZ4.7B |
| 6556 | 4822 130 11148 | UDZ4.7B |
| 6559 | 4822 130 11148 | UDZ4.7B |
| 6560 | 4822 130 11148 | UDZ4.7B |
| 6628 | 4822 130 11397 | BAS316 |
| 6634 | 4822 130 11148 | UDZ4.7B |
| 6635 | 4822 130 11148 | UDZ4.7B |
| 6655 | 4822 130 11148 | UDZ4.7B |
| 6656 | 4822 130 11148 | UDZ4.7B |
| 6659 | 4822 130 11148 | UDZ4.7B |
| 6660 | 4822 130 11148 | UDZ4.7B |
| 6732 | 4822 130 11551 | UDZS10B |
| 6742 | 4822 130 11551 | UDZS10B |
| 6750 | 4822 130 10328 | BAV99W |
| 6760 | 4822 130 10328 | BAV99W |

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|---|---|---|
| 7211 | 3198 010 42320 | BC857BW |
| 7211 | 5322 130 42756 | BC857C |
| 7225 | 4822 209 30095 | LM833D |
| 7238 | 4822 209 30095 | LM833D |
| 7260 | 4822 209 30095 | LM833D |
| 7302 | 3198 010 42310 | BC847BW |
| 7303 | 3198 010 42310 | BC847BW |
| 7315 | 9338 028 20668 | LM311D |
| 7330 | 4822 130 42804 | BC817-25 |
| 7340 | 3198 010 42310 | BC847BW |
| 7355 | 5322 130 60845 | BC807-25 |
| 7365 | 9322 161 86668 | IRF7343 |
| 7402 | 3198 010 42310 | BC847BW |
| 7403 | 3198 010 42310 | BC847BW |
| 7415 | 9338 028 20668 | LM311D |
| 7430 | 4822 130 42804 | BC817-25 |
| 7440 | 3198 010 42310 | BC847BW |
| 7455 | 5322 130 60845 | BC807-25 |
| 7465 | 9322 161 86668 | IRF7343 |
| 7502 | 3198 010 42310 | BC847BW |
| 7503 | 3198 010 42310 | BC847BW |
| 7515 | 9338 028 20668 | LM311D |
| 7530 | 4822 130 42804 | BC817-25 |
| 7540 | 3198 010 42310 | BC847BW |
| 7555 | 5322 130 60845 | BC807-25 |
| 7565 | 9322 161 86668 | IRF7343 |
| 7602 | 3198 010 42310 | BC847BW |
| 7603 | 3198 010 42310 | BC847BW |
| 7615 | 9338 028 20668 | LM311D |
| 7630 | 4822 130 42804 | BC817-25 |
| 7640 | 3198 010 42310 | BC847BW |
| 7655 | 5322 130 60845 | BC807-25 |
| 7665 | 9322 161 86668 | IRF7343 |
| 7735 | 4822 130 60142 | BC869 |
| 7735 | 9322 168 88668 | LM317D2T |
| 7736 | 3198 010 42310 | BC847BW |
| 7745 | 5322 130 61569 | BC868 |
| 7745 | 9322 150 89668 | LM337D2T |
| 7746 | 3198 010 42320 | BC857BW |
| 7746 | 5322 130 42756 | BC857C |
| 7751 | 3198 010 42310 | BC847BW |
| 7753 | 3198 010 42320 | BC857BW |
| 7753 | 5322 130 42756 | BC857C |
| 7755 | 3198 010 42310 | BC847BW |
| 7761 | 3198 010 42320 | BC857BW |
| 7761 | 5322 130 42756 | BC857C |

## EMC Filter Panel [EMC]

### Various

| | | |
|---|---|---|
| 0002 | 3122 358 76831 | EMC foam fiter panel |
| 1320 | 2422 025 16545 | Connector 10P m |
| 1330 | 2422 025 16545 | Connector 10P m |
| 1345 | 2422 025 16835 | Connector 3P |
| 1355 | 2422 025 16835 | Connector 3P |

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| | | |
|---|---|---|
| 2300 | 5322 126 11583 | 10nF 10% 50V 0603 |
| 2301 | 5322 126 11583 | 10nF 10% 50V 0603 |
| 2302 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2303 | 5322 126 11583 | 10nF 10% 50V 0603 |
| 2304 | 5322 126 11583 | 10nF 10% 50V 0603 |
| 2305 | 5322 126 11583 | 10nF 10% 50V 0603 |
| 2306 | 5322 126 11583 | 10nF 10% 50V 0603 |
| 2307 | 5322 126 11583 | 10nF 10% 50V 0603 |
| 2308 | 5322 126 11583 | 10nF 10% 50V 0603 |

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| | | |
|---|---|---|
| 3300 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3301 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3302 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3303 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3304 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3305 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3306 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3307 | 4822 051 30101 | 100Ω 5% 0.062W |

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|---|---|---|
| 5300 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5301 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5302 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5303 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5304 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5305 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5306 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5307 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5308 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5309 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5310 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5311 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5312 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5313 | 2422 549 43062 | Bead 600Ω at 100MHz |

## LED/Switch Panel [LD]

### Various

| | | |
|---|---|---|
| 0040 | 3122 128 14292 | Mains knob FM24 SL |
| 0044 | 3122 124 36081 | Day light filter |
| 0317 | 2422 025 13369 | Socket 6P (Telephone) |
| 0320 | 2422 025 16545 | Connector 10P m |
| 1101 | 2422 128 02927 | Switch push 2P |
| 1101 | 4822 276 13483 | Switch push 2P 25V h |
| 1320 | 2422 025 16545 | Connector 10P m |
| 8320 | 3122 358 76521 | Cable L20-S20 FM24 |

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| | | |
|---|---|---|
| 2107 | 4822 124 12095 | 100µF 20% 16V |
| 2120 | 2020 024 90166 | 10µF 20% 35V |
| 2126 | 2020 552 96326 | 220nF 10% 16V |

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| | | |
|---|---|---|
| 3101 | 4822 051 30151 | 150Ω 5% 0.062W |

| | | |
|---|---|---|
| 3102 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3103 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3103 | 4822 051 30221 | 220Ω 5% 0.062W |
| 3104 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3105 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3105 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3106 | 4822 051 30151 | 150Ω 5% 0.062W |
| 3107 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3108 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3109 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3120 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3121 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3122 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3123 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3124 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3125 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3126 | 4822 051 30474 | 470kΩ 5% 0.062W |
| 3127 | 4822 051 30474 | 470kΩ 5% 0.062W |
| 4101 | 4822 051 30008 | Jumper 0603 |
| 4107 | 4822 051 30008 | Jumper 0603 |

| | | |
|---|---|---|
| 5100 | 2422 549 43769 | Bead 30Ω at 100MHz |

| | | |
|---|---|---|
| 6101 | 4822 130 11564 | UDZ3.9B |
| 6103 | 4822 130 83915 | TLMV3100 |
| 6105 | 4822 130 11564 | UDZ3.9B |
| 6127 | 9322 140 63685 | TEMD5000 |

| | | |
|---|---|---|
| 7103 | 3198 010 42320 | BC857BW |
| 7103 | 5322 130 42756 | BC857C |
| 7103 | 9340 218 50115 | BC857BW |
| 7105 | 3198 010 42320 | BC857BW |
| 7105 | 5322 130 42756 | BC857C |
| 7105 | 9340 218 50115 | BC857BW |
| 7107 | 9322 155 82667 | TSOP2236 |
| 7107 | 9322 155 98667 | TSOP2236YA1 |
| 7107 | 9322 178 03667 | TSOP2136YA1 |
| 7120 | 5322 209 82941 | LM358D |

## Power Supply Panel FM23 AC [P]

### Various

| | | |
|---|---|---|
| 0003 | 3122 128 13822 | Shielding frame |
| 0003 | 3122 128 13913 | Mounting kit assy |
| 0006⚠ | 4822 265 11253 | Fuse holder 2p |
| 0008⚠ | 4822 265 11253 | Fuse holder 2p |
| 0010 | 3122 421 60171 | Spring |
| 0011 | 3122 421 60171 | Spring |
| 0015 | 4822 695 00005 | Insulating plate |
| 0016 | 3122 121 67211 | Clip max247 |
| 0017 | 3122 121 67201 | Clip large |
| 0018 | 3122 121 67201 | Clip large |
| 0020 | 3122 121 67191 | Clip small |
| 0021 | 3122 121 67191 | Clip small |
| 0022 | 3122 121 67191 | Clip small |
| 0023 | 3122 121 67191 | Clip small |
| 0024 | 3122 121 67191 | Clip small |
| 0025 | 3122 121 67191 | Clip small |
| 0040 | 2413 015 00065 | Cable tie BT18R/4B |
| 0041 | 3122 124 36011 | Thermo foam |
| 0205 | 3104 308 78231 | Transistor cooling clip |
| 0206 | 3104 308 78231 | Transistor cooling clip |
| 0302 | 2422 025 10769 | Connector 9P |
| 0305 | 2422 025 10772 | Connector 12P m |
| 0306 | 2422 025 08149 | Connector 6p m |
| 0307 | 2422 025 17154 | Connector 20P f |
| 0307 | 2422 025 17759 | Connector 20P f |
| 0308⚠ | 4822 265 20723 | Connector 2p m |
| 0319 | 2422 025 10668 | Connector 13P m |
| 0323 | 2422 025 15085 | Connector 10P m |
| 0333 | 2422 025 12827 | Connector 9P m 3.96 |
| 0342 | 4822 267 10618 | Connector 7P |
| 0352 | 4822 267 10618 | Connector 7P |
| 0389 | 4822 267 10735 | Connector 3p m |
| 0390 | 4822 267 10735 | Connector 3p m |
| 0392 | 2422 025 09406 | Connector 4p |
| 1004⚠ | 4822 070 32002 | Fuse 2A |
| 1005⚠ | 4822 071 55002 | Fuse T5A 250V |
| 1041 | 4822 071 55002 | Fuse T5A 250V |
| 1042 | 4822 071 55002 | Fuse T5A 250V |
| 1045⚠ | 4822 071 55002 | Fuse T5A 250V |
| 1084⚠ | 2422 086 10849 | Fuse F1A 250V |
| 1084 | 4822 071 31002 | Fuse F1A 250V |
| 1084 | 9965 000 07788 | Fuse T2A 250V |
| 1110⚠ | 4822 071 55002 | Fuse T5A 250V |
| 1200⚠ | 9965 000 07788 | Fuse T2A 250V |
| 1260⚠ | 2122 662 00107 | Fuse RR60-075 A |
| 1400⚠ | 4822 253 30467 | Fuse 6.3A |
| 1401⚠ | 9965 000 07788 | Fuse T2A 250V |
| 1402⚠ | 4822 252 60151 | Sparkgap dsp501 |
| 1450⚠ | 4822 280 10382 | SDT-SS-109DM |
| 1460⚠ | 4822 280 10382 | SDT-SS-109DM |
| 8303 | 3122 358 76301 | Tree assy A03-LS left |
| 8304 | 3122 358 76291 | Tree assy A04-LS right |

| | | |
|---|---|---|
| 2000 | 2020 554 90148 | 470pF 20% 250V |
| 2001 | 2222 151 90048 | 47µF 20% 400V |
| 2001 | 2222 151 90062 | 47µF 20% 450V |
| 2002 | 4822 124 41751 | 47µF 20% 50V |
| 2003 | 4822 124 12056 | 1000µF 20% 35V |
| 2004 | 2222 464 90017 | 200pF 2% 630V |
| 2005 | 4822 121 51288 | 100pF 630V |
| 2006 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2007 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2007 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2008 | 5322 126 11583 | 10nF 10% 50V 0603 |
| 2009 | 4822 124 22652 | 2.2µF 20% 50V |
| 2010 | 5322 126 11583 | 10nF 10% 50V 0603 |
| 2011 | 2222 375 90161 | 18nF 1.6kV 5% |
| 2011 | 4822 121 70617 | 10nF 5% 1,6kV |
| 2012 | 4822 126 11254 | 330pF 10% 2kV |
| 2012 | 4822 126 13864 | 330PF 10% 2KV |
| 2013 | 4822 126 11254 | 330pF 10% 2kV |
| 2013 | 4822 126 13864 | 330PF 10% 2KV |
| 2014 | 4822 126 13862 | 1.5nF 10% 2kV |
| 2015 | 5322 126 11583 | 10nF 10% 50V 0603 |
| 2016 | 4822 124 22652 | 2.2µF 20% 50V |
| 2017 | 4822 121 70617 | 10nF 5% 1,6kV |
| 2020 | 2222 056 59222 | 2200µF 100V 20% |
| 2021 | 2222 056 59222 | 2200µF 100V 20% |
| 2022 | 4822 124 12056 | 1000µF 20% 35V |
| 2023 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2023 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2024 | 4822 126 14043 | 1µF 20% 16V |
| 2024 | 5322 126 11579 | 3.3nF 10% 63V |
| 2025 | 2020 321 90041 | 180nF 250V 5% |
| 2026 | 4822 126 14238 | 2.2nF 50V 0603 |
| 2027 | 3198 017 31530 | 15nF 20% 50V 0603 |
| 2028 | 2238 930 11541 | 220pF 5% 200V |
| 2028 | 4822 126 13883 | 220pF 5% 50V |
| 2029 | 4822 126 13883 | 220pF 5% 50V |
| 2030 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2030 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2032 | 2238 916 15641 | 22nF 10% 25V 0603 |
| 2032 | 4822 126 14494 | 22nF 10% 25V 0603 |
| 2033 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2033 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2034 | 4822 126 11979 | 27pF 5% 2KV |
| 2035 | 2238 586 15623 | 1nF 10% 50V 0603 |
| 2036 | 2238 916 15641 | 22nF 10% 25V 0603 |
| 2036 | 4822 126 14494 | 22nF 10% 25V 0603 |
| 2038 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2040 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2040 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2041 | 4822 126 13883 | 220pF 5% 50V |
| 2042 | 4822 126 13883 | 220pF 5% 50V |
| 2043 | 2020 021 91543 | 47µF 20% 160V |
| 2043 | 2222 056 59222 | 2200µF 100V 20% |
| 2044 | 2238 930 11541 | 220pF 5% 200V |
| 2044 | 4822 126 13883 | 220pF 5% 50V |
| 2045 | 4822 126 13883 | 220pF 5% 50V |
| 2050 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2050 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2054 | 2020 552 94427 | 100pF 5% 50v 0603 |
| 2054 | 2238 606 11536 | 100pF 5% 100V |
| 2054 | 4822 122 31765 | 100pF 2% 63V |
| 2055 | 2238 606 11547 | 680pF 5% 680V |
| 2055 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2058 | 4822 124 40756 | 1µF20% 100V |
| 2059 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2059 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2061 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2061 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2090 | 4822 124 40196 | 220µF 20% 16V |
| 2090 | 4822 124 40769 | 4.7µF 20% 100V |
| 2111 | 4822 126 13883 | 220pF 5% 50V |
| 2112 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2113 | 2020 012 93505 | 10µF 20% 25V |
| 2113 | 4822 124 12379 | 220µF 25V |
| 2113 | 4822 124 80144 | 220µF 20% 25V |
| 2113 | 4822 124 80195 | 470µF 20% 10V |
| 2113 | 4822 124 80875 | 220µF 20% 25V |
| 2114 | 4822 126 13473 | 220nF 80-20% 50V |
| 2117 | 2222 780 15656 | 330nF 10% 16V |
| 2117 | 4822 126 12102 | 330nF 10% 16V 0805 |
| 2118 | 4822 126 11382 | 1nF 10% 1kV |
| 2118 | 4822 126 13449 | 1nF 10% 2KV |
| 2121 | 2222 056 59222 | 2200µF 100V 20% |
| 2122 | 4822 121 51319 | 1µF 10% 63V |
| 2123 | 4822 126 14043 | 1µF 20% 16V |
| 2123 | 5322 126 11579 | 3.3nF 10% 63V |
| 2126 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2126 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2133 | 3198 029 32290 | 22µF 20% 25V |
| 2137 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2138 | 4822 124 21913 | 1µF 20% 63V |
| 2203 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2203 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2205 | 2020 552 95447 | 2.2µF 20% 16V |
| 2205 | 3198 032 64090 | 2.2µF 20% 25V |
| 2210 | 4822 124 40433 | 47µF 20% 25V |
| 2211 | 4822 126 13883 | 220pF 5% 50V |
| 2212 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2212 | 4822 126 13879 | 220nF 20% 16V |
| 2212 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2217 | 2222 780 15656 | 330nF 10% 16V |
| 2217 | 4822 126 12102 | 330nF 10% 16V 0805 |
| 2218 | 2020 558 90609 | 4.7nF 10% 1kV |
| 2218 | 2222 375 90141 | 3.3nF 1.6kV 5% |
| 2219 | 2020 021 91543 | 47µF 20% 160V |
| 2219 | 2222 151 90048 | 47µF 20% 400V |
| 2222 | 2020 552 94427 | 100pF 5% 50v 0603 |
| 2222 | 4822 122 31765 | 100pF 2% 63V |
| 2223 | 2020 552 94427 | 100pF 5% 50v 0603 |
| 2223 | 4822 122 31765 | 100pF 2% 63V |
| 2224 | 2020 021 91551 | 2200µF 20% 25V |
| 2225 | 2020 021 91551 | 2200µF 20% 25V |
| 2226 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2226 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2227 | 2020 552 94427 | 100pF 5% 50v 0603 |
| 2227 | 4822 122 31765 | 100pF 2% 63V |
| 2228 | 2020 021 91411 | 1000µF 20% 35V |
| 2230 | 5322 121 10472 | 47µF |
| 2231 | 5322 121 10472 | 47µF |
| 2232 | 2020 552 94427 | 100pF 5% 50v 0603 |
| 2232 | 4822 122 31765 | 100pF 2% 63V |
| 2260 | 4822 126 14043 | 1µF 20% 16V |
| 2261 | 2020 021 91411 | 1000µF 20% 35V |
| 2262 | 4822 126 13473 | 220nF 80-20% 50V |
| 2263 | 2222 861 15272 | 2.7nF 5% 50V 0805 |
| 2264 | 4822 121 51252 | 470nF 5% 63V |
| 2264 | 4822 126 13482 | 470nF 80-20% 16V |
| 2265 | 4822 126 14241 | 330pF 50V 0603 |
| 2266 | 2238 916 15641 | 22nF 10% 25V 0603 |
| 2266 | 4822 126 14494 | 22nF 10% 25V 0603 |
| 2267 | 5322 126 10223 | 4.7nF 10% 63V |
| 2268 | 4822 126 13473 | 220nF 80-20% 50V |
| 2269 | 2020 021 91524 | 220µF 20% 25V |
| 2270 | 4822 124 40433 | 47µF 20% 25V |
| 2290 | 5322 126 11583 | 10nF 10% 50V 0603 |
| 2291 | 4822 126 13883 | 220pF 5% 50V |
| 2292 | 2020 021 91354 | 1000µF 20%  50V |
| 2293 | 4822 126 13883 | 220pF 5% 50V |
| 2294 | 2020 021 91354 | 1000µF 20%  50V |
| 2303 | 4822 121 42408 | 220nF 10% 50V |
| 2304 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2304 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2304 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2305 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2305 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2306 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2306 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2316 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2322 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2322 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2324 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2324 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2343 | 4822 124 22652 | 2.2µF 20% 50V |
| 2350 | 4822 124 40207 | 100µF 20% 25V |
| 2352 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2352 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2364 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2364 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2366 | 4822 126 14585 | 100nF 10% 50V |
| 2370 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2370 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2376 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2376 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2380 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2380 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2381 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2381 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2382 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2385 | 3198 017 41050 | 1µF 10V 0603 |
| 2393 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2393 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2396 | 4822 121 42408 | 220nF 10% 50V |
| 2400 | 4822 126 13589 | 470nF 275V |

| | | |
|---|---|---|
| 2401 | 4822 121 10512 | 275V 220N 20% |
| 2401 | 4822 126 13589 | 470nF 275V |
| 2402 | 2020 554 90148 | 470pF 20% 250V |
| 2403 | 2020 554 90148 | 470pF 20% 250V |
| 2404 | 4822 126 14525 | 47pF 5% 1kV |
| 2405 | 2020 554 90148 | 470pF 20% 250V |
| 2405 | 4822 126 13841 | 1nF 20% 250V |
| 2406 | 4822 126 14525 | 47pF 5% 1kV |
| 2407 | 2020 554 90148 | 470pF 20% 250V |
| 2465 | 4822 124 40207 | 100µF 20% 25V |
| 2503 | 2222 151 90061 | 22µF 20% 450V |
| 2503 | 2222 151 90062 | 47µF 20% 450V |
| 2504 | 5322 126 11578 | 1nF 10% 50V 0603 |
| 2505 | 2020 021 91354 | 1000µF 20% 50V |
| 2505 | 3198 028 44790 | 47µF 20% 35V |
| 2507 | 2020 552 94427 | 100pF 5% 50v 0603 |
| 2507 | 4822 122 31765 | 100pF 2% 63V |
| 2508 | 4822 124 12032 | 4.7µF 20% 50V |
| 2509 | 2020 552 94427 | 100pF 5% 50v 0603 |
| 2509 | 4822 122 31765 | 100pF 2% 63V |
| 2510 | 4822 124 81145 | 1000µF 16V 20% |
| 2511 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2511 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2512 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2512 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2513 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2513 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2530 | 4822 124 40207 | 100µF 20% 25V |
| 2530 | 5322 124 40641 | 10µF 20% 100V |
| 2532 | 4822 124 40207 | 100µF 20% 25V |
| 2533 | 4822 124 40207 | 100µF 20% 25V |
| 2540 | 4822 124 40207 | 100µF 20% 25V |
| 2541 | 4822 124 40207 | 100µF 20% 25V |
| 2600 | 4822 122 33799 | 1nF 10% 1kV |
| 2601 | 4822 122 33799 | 1nF 10% 1kV |
| 2605 | 2222 479 90086 | 1µF 400V 5% |
| 2608 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2610 | 4822 121 70581 | 1.5nF 5% 2kV |
| 2612 | 5322 126 11578 | 1nF 10% 50V 0603 |
| 2613 | 5322 126 11578 | 1nF 10% 50V 0603 |
| 2616 | 2222 157 57331 | 330UF 30X50 450V |
| 2640 | 4822 126 13881 | 470pF 5% 50V |
| 2641 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2642 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2651 | 5322 126 11583 | 10nF 10% 50V 0603 |
| 2653 | 4822 126 14241 | 330pF 50V 0603 |
| 2654 | 4822 124 40433 | 47µF 20% 25V |
| 2655 | 2238 780 15654 | 220nF 10% 16V |
| 2655 | 4822 121 51319 | 1µF 10% 63V |
| 2656 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2656 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2662 | 4822 124 80061 | 1000µF 20% 25V |
| 2663 | 4822 124 40207 | 100µF 20% 25V |
| 2664 | 4822 124 40207 | 100µF 20% 25V |
| 2665 | 4822 126 13881 | 470pF 5% 50V |
| 2666 | 4822 126 13193 | 4.7nF 10% 63V |
| 2670 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2670 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2671 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2671 | 3198 017 34730 | 47nF 16V 0603 |
| 2671 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2672 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2672 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2673 | 4822 121 43343 | 4.7nF 10% 400V |
| 2674 | 4822 121 41664 | 22nF 10% 400V |
| 2700 | 4822 124 80791 | 470µF 20% 16V |
| 2701 | 5322 126 11583 | 10nF 10% 50V 0603 |
| 2703 | 4822 124 80791 | 470µF 20% 16V |
| 2707 | 5322 126 11583 | 10nF 10% 50V 0603 |
| 2709 | 4822 124 80791 | 470µF 20% 16V |

| | | |
|---|---|---|
| 3003 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3004 | 4822 051 30153 | 15kΩ 5% 0.062W |
| 3005 | 4822 051 20393 | 39kΩ 5% 0.1W |
| 3005 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3006 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3007 | 4822 051 20472 | 4.7kΩ 5% 0.1W |
| 3007 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3008 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3009 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3010 | 4822 051 30153 | 15kΩ 5% 0.062W |
| 3011 | 4822 051 30561 | 560Ω 5% 0.062W |
| 3012 | 4822 051 20472 | 4.7kΩ 5% 0.1W |
| 3012 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3013 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3014 | 4822 116 52191 | 33Ω 5% 0.5W |
| 3015 | 4822 116 52176 | 10Ω 5% 0.5W |
| 3016 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3017 | 4822 116 52191 | 33Ω 5% 0.5W |
| 3018 | 4822 116 52176 | 10Ω 5% 0.5W |
| 3019 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3020 | 4822 051 30563 | 56kΩ 5% 0.062W |
| 3021 | 4822 053 11688 | 6.8Ω 5% 2W |
| 3022 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3023 | 4822 117 12902 | 8.2kΩ 1% 0.063W 0603 |
| 3023 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3024 | 4822 050 27503 | 75kΩ 1% 0,6W |
| 3025 | 4822 117 12903 | 1.8kΩ 1% 0.063W 0603 |
| 3026 | 4822 101 11186 | 470Ω 30% 0.1W |
| 3026 | 4822 101 11383 | 470Ω 30% LIN |
| 3027 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3028 | 4822 117 10362 | 7.5kΩ 1% 0,1W |
| 3029 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3030 | 4822 051 30183 | 18kΩ 5% 0.062W |
| 3031 | 2322 704 61103 | 11kΩ 1% 0603 |
| 3032 | 2322 704 61103 | 11kΩ 1% 0603 |
| 3033 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3037 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3038 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3039 | 4822 051 30105 | 1MΩ 5% 0.062W |
| 3040 | 4822 117 10837 | 100kΩ 1% 0.1W |
| 3041 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3042 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3043 | 4822 051 20472 | 4.7kΩ 5% 0.1W |
| 3043 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3044 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3045 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3046 | 4822 053 20565 | 5.6MΩ 5% 0.25W |
| 3047 | 4822 051 30154 | 150kΩ 5% 0.062W |
| 3048 | 4822 051 20472 | 4.7kΩ 5% 0.1W |
| 3048 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3049 | 4822 051 30123 | 12kΩ 5% 0.062W |
| 3050⚠ | 4822 052 10398 | 3.9Ω 5% 0,33W |
| 3051 | 4822 051 20399 | 39Ω 5% 0.1W |
| 3052 | 2322 662 93135 | 100Ω PTC 500V |
| 3053 | 2322 662 93131 | 10Ω PTC |
| 3053 | 2322 662 93135 | 100Ω PTC 500V |
| 3054 | 4822 050 21003 | 10kΩ 1% 0.6W |
| 3056 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3057 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3057 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3058 | 2322 730 61224 | 220kΩ 5% 0.062W 0805 |
| 3058 | 4822 051 20105 | 1MΩ 5% 0.1W |
| 3061 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3062 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3064 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3065 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3066 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3067 | 4822 051 30153 | 15kΩ 5% 0.062W |
| 3070 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3071 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3075 | 4822 116 83866 | 1MΩ 5% 0.5W |
| 3076 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3077 | 4822 116 83866 | 1MΩ 5% 0.5W |
| 3078 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3080 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3081 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3082 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3083 | 4822 051 10102 | 1kΩ 2% 0.25W |
| 3084 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3085 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3086 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3087 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3088 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3090 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3090 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3091 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3092 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3092 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3093 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3095 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3096 | 4822 051 30562 | 5.6kΩ 5% 0.063W 0603 |
| 3097 | 4822 117 12968 | 820Ω 5% 0.62W |
| 3110 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3111 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3112 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3113 | 4822 051 30474 | 470kΩ 5% 0.062W |
| 3114 | 4822 051 20564 | 560kΩ 5% 0.1W |
| 3115 | 4822 117 12891 | 220kΩ 1% 0.063W 0603 |
| 3116 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3117 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3118 | 4822 116 83303 | 0.1Ω 2W |
| 3119 | 4822 116 83303 | 0.1Ω 2W |
| 3120 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3120 | 4822 117 12903 | 1.8kΩ 1% 0.063W 0603 |
| 3121 | 4822 117 12902 | 8.2kΩ 1% 0.063W 0603 |
| 3121 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3122 | 2322 734 67503 | 75kΩ 1% 0.062W 0805 |
| 3123 | 4822 117 10965 | 18kΩ 1% 0.1W |
| 3124 | 2120 108 94004 | 7.5kΩ 1% 0603 |
| 3125 | 2120 108 94004 | 7.5kΩ 1% 0603 |
| 3126 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3127 | 4822 101 11187 | 1kΩ 30% 0,1W |
| 3128 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3129 | 4822 053 10103 | 10kΩ 5% 1W |
| 3130 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3131 | 2322 704 61103 | 11kΩ 1% 0603 |
| 3132 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3133 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3133 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3134 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3135 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3136 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3137 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3138 | 4822 117 11503 | 220Ω 1% 0.1W |
| 3139 | 4822 117 11503 | 220Ω 1% 0.1W |
| 3140 | 2322 734 67503 | 75kΩ 1% 0.062W 0805 |
| 3141 | 2322 734 67503 | 75kΩ 1% 0.062W 0805 |
| 3142 | 5322 117 12487 | 1kΩ 1% 0.125W |
| 3143 | 4822 053 11472 | 4kΩ 5% 2W |
| 3146 | 2306 327 90035 | Jump. 0.22Ω |
| 3147 | 2322 704 61103 | 11kΩ 1% 0603 |
| 3200 | 2322 730 61224 | 220kΩ 5% 0.062W 0805 |
| 3201 | 4822 053 10103 | 10kΩ 5% 1W |
| 3202 | 4822 051 30479 | 47Ω 5% 0.062W |
| 3203 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3204 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3205 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3212 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3213 | 4822 051 30105 | 1MΩ 5% 0.062W |
| 3214 | 4822 117 12889 | 270kΩ 1% 0.063W 0603 |
| 3216 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3217 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3218 | 4822 116 83303 | 0.1Ω 2W |
| 3219 | 4822 116 83303 | 0.1Ω 2W |
| 3224 | 5322 117 13028 | 12kΩ 1% 0.063W 0603 |
| 3225 | 2322 704 61103 | 11kΩ 1% 0603 |
| 3226 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3228 | 4822 051 30151 | 150Ω 5% 0.062W |
| 3240 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3241 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3260 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3261 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3262 | 4822 117 11188 | 20kΩ 1% 0,1W |
| 3264 | 4822 051 30682 | 6.8kΩ 5% 0.062W |
| 3265 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3268 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3268 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3292 | 4822 051 30561 | 560Ω 5% 0.062W |
| 3300 | 4822 117 13579 | 220kΩ 1% 0.1W 0805 |
| 3301 | 4822 117 13579 | 220kΩ 1% 0.1W 0805 |
| 3302 | 2312 916 71004 | 100kΩ 1% |
| 3302 | 4822 117 13579 | 220kΩ 1% 0.1W 0805 |
| 3302 | 8222 676 14191 | 100kΩ 1% 0.062W 0805 |
| 3303 | 2312 916 71004 | 100kΩ 1% |
| 3303 | 4822 117 13579 | 220kΩ 1% 0.1W 0805 |
| 3303 | 8222 676 14201 | 57kΩ 1% 0.062W 0805 |
| 3304 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3305 | 2312 916 76202 | 6.2kΩ 1% |
| 3305 | 2322 704 61103 | 11kΩ 1% 0603 |
| 3305 | 4822 051 30008 | Jumper 0603 |
| 3306 | 2322 704 61103 | 11kΩ 1% 0603 |
| 3307 | 2322 704 61103 | 11kΩ 1% 0603 |
| 3307 | 5322 117 13028 | 12kΩ 1% 0.063W 0603 |
| 3308 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3309 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3310 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3311 | 4822 117 13579 | 220kΩ 1% 0.1W 0805 |
| 3312 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3313 | 2120 108 94004 | 7.5kΩ 1% 0603 |
| 3313 | 2322 704 61103 | 11kΩ 1% 0603 |
| 3313 | 4822 117 11188 | 20kΩ 1% 0,1W |
| 3314 | 2120 108 94004 | 7.5kΩ 1% 0603 |
| 3315 | 5322 117 12487 | 1kΩ 1% 0.125W |
| 3316 | 2312 916 77502 | 7.5kΩ 1% |
| 3316 | 4822 117 11596 | 390Ω 1% 0.1W |
| 3317 | 2120 108 94004 | 7.5kΩ 1% 0603 |
| 3318 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3319 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3320 | 2322 704 61103 | 11kΩ 1% 0603 |
| 3320 | 4822 117 10833 | 10kΩ 1% 0.1W |
| 3321 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3322 | 4822 117 10833 | 10kΩ 1% 0.1W |
| 3322 | 5322 117 13042 | 3.9kΩ 1% 0.063W 0603 |
| 3323 | 4822 117 10833 | 10kΩ 1% 0.1W |
| 3323 | 5322 117 13028 | 12kΩ 1% 0.063W 0603 |
| 3324 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3325 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3326 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3327 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3328 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3330 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3331 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3332 | 4822 117 11144 | 3.9kΩ 1% 0.1W |
| 3333 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3334 | 4822 117 12955 | 2.7kΩ 1% 0.1W 0805 |
| 3335 | 4822 116 83933 | 15kΩ 1% 0.1W |
| 3338 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3339 | 4822 051 30472 | 4.7kΩ 5% 0.062W |

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|---|---|---|
| 3340 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3341 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3342 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3343 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3344 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3345 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3346 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3347 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3348 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3349 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3350 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3351 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3352 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3353 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3354 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3358 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3359 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3360 | 4822 117 11817 | 1.2kΩ 1% 1/16W |
| 3361 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3362 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3363 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3364 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3365 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3366 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3367 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3368 | 2120 660 90042 | PTC 330Ω 16V |
| 3369 | 4822 051 30272 | 2.7kΩ 5% 0.062W |
| 3370 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3371 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3372 | 9337 224 50116 | Temp sens. KTY81-210 |
| 3372 | 9337 224 60116 | Temp sens. KTY81-220 |
| 3373 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3373 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3374 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3375 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3376 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3377 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3377 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3378 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3378 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3380 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3381 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3382 | 4822 117 11449 | 2.2kΩ 5% 0.1W 0805 |
| 3382 | 4822 117 12955 | 2.7kΩ 1% 0.1W 0805 |
| 3382 | 5322 117 13039 | 222kΩ 1% 0.063W 0603 |
| 3382 | 8222 676 14211 | 4.75kΩ 1% 0.062W 0805 |
| 3383 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3384 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3385 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3386 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3387 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3388 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3389 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3390 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3390 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3391 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3392 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3393 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3393 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3394 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3395 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3396 | 2312 916 71004 | 100kΩ 1% |
| 3397 | 2312 916 71004 | 100kΩ 1% |
| 3400 | 2322 595 90021 | VDR 1mA/495V 850V |
| 3401 | 4822 117 10118 | 1MΩ 5% 0,5W |
| 3402 | 4822 053 21475 | 4.7MΩ 5% 0,5W |
| 3403 | 4822 053 21475 | 4.7MΩ 5% 0,5W |
| 3404 | 4822 116 83872 | 220Ω 5% 0.5W |
| 3450 | 2322 662 93131 | 10Ω PTC |
| 3451 | 2322 662 93131 | 10Ω PTC |
| 3452 | 2122 612 00051 | NTC 1Ω 20% |
| 3460 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3461 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3463 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3465 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3467 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3469 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3470 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3501 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3502 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3503 | 5322 117 13026 | 4.7kΩ 1% 0.063W 0603 |
| 3503 | 5322 117 13042 | 3.9kΩ 1% 0.063W 0603 |
| 3504 | 5322 117 13024 | 33kΩ 1% 0.063W 0603 |
| 3505 | 4822 117 11139 | 1.5kΩ 1% 0.1W |
| 3505 | 5322 117 13034 | 1.5kΩ 1% 0.063W 0603 |
| 3506 | 2322 662 93131 | 10Ω PTC |
| 3507 | 4822 053 20225 | 2.2MΩ 5% 0.25W |
| 3508 | 2322 194 63109 | 10Ω 5% 2W |
| 3520 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3520 | 4822 051 30109 | 10Ω 5% 0.062W |
| 3530 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3608 | 4822 116 52179 | 12Ω 5% 0,5W |
| 3610 | 5322 116 53564 | 3.3Ω 5% 0.5W |
| 3611 | 4822 050 11002 | 1kΩ 1% 0.4W |
| 3613 | 2120 106 90565 | 0.1Ω 5% 1W |
| 3614 | 2120 106 90565 | 0.1Ω 5% 1W |
| 3614 | 2120 106 90639 | 0.12Ω 5% 1W |
| 3615 | 2120 106 90639 | 0.12Ω 5% 1W |
| 3639 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3640 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3641 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3642 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3650 | 2322 156 21305 | 1.3MΩ 1% 0,25W |
| 3651 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3651 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3652 | 4822 051 30105 | 1MΩ 5% 0.062W |
| 3653 | 4822 116 52231 | 820Ω 5% 0.5W |
| 3654 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3655 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3663 | 4822 052 10108 | 1Ω 5% 0.33W |
| 3664 | 4822 117 13579 | 220kΩ 1% 0.1W 0805 |
| 3665 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3666 | 4822 116 52175 | 100Ω 5% 0.5W |
| 3667 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3668 | 4822 052 11102 | 1kΩ 5% 0,5W |
| 3670 | 4822 050 27504 | 750kΩ 1% 0,6W |
| 3671 | 4822 117 10833 | 10kΩ 1% 0.1W |
| 3673 | 4822 052 11102 | 1kΩ 5% 0,5W |
| 3674 | 4822 053 20105 | 1MΩ 5% 0,25W |
| 3675 | 4822 053 10221 | 220Ω 5% 1W |
| 3676 | 4822 053 10471 | 470Ω 5% 1W |
| 3700 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3700 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3701 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3701 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3702 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3702 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3703 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3703 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3706 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3706 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3707 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3707 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3708 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3708 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3709 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3709 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3999 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 4268 | 4822 051 30008 | Jumper 0603 |

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| | | |
|---|---|---|
| 5001 | 3128 138 38561 | Transformer CE136H |
| 5001 | 8222 289 53691 | Driver transf. CE136H |
| 5002▲ | 3128 138 40371 | Transformer CE423D |
| 5003 | 4822 157 71442 | 150µH 10% |
| 5120 | 3128 138 40381 | Inductor Coil CU20V |
| 5200 | 3198 018 71010 | 100µF 10% |
| 5213 | 2422 264 00433 | Loudspeaker 8Ω 15W |
| 5214 | 2422 264 00433 | Loudspeaker 8Ω 15W |
| 5215 | 2422 264 00432 | Tweeter 8Ω 15W R49 |
| 5216 | 2422 264 00432 | Tweeter 8Ω 15W R49 |
| 5220 | 3128 138 70541 | Transformer CT296F |
| 5224 | 2422 535 95273 | 6.8µH 20% |
| 5225 | 2422 535 95273 | 6.8µH 20% |
| 5260 | 3198 018 71010 | 100µF 10% |
| 5268 | 2422 536 00288 | 100µH 10% |
| 5290 | 3128 138 40391 | Transformer CU15 |
| 5291 | 4822 157 71467 | 39µH 10% |
| 5292 | 4822 157 71467 | 39µH 10% |
| 5293 | 4822 157 71467 | 39µH 10% |
| 5401▲ | 3122 138 38901 | Mains filter CU28D3 |
| 5402▲ | 3122 138 38901 | Mains filter CU28D3 |
| 5500▲ | 3128 138 40361 | Transformer CE165T |
| 5505 | 4822 157 71467 | 39µH 10% |
| 5600 | 3128 138 40351 | Coil CE423D |
| 5612 | 4822 157 11411 | Bead 83Ω at 100MHz |
| 5703 | 4822 157 71414 | 1000µH 10% |
| 5704 | 4822 157 11499 | BLM11P600SPT |
| 5709 | 4822 157 71414 | 1000µH 10% |
| 5710 | 4822 157 11499 | BLM11P600SPT |

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|---|---|---|
| 6004 | 4822 130 11397 | BAS316 |
| 6005 | 4822 130 11397 | BAS316 |
| 6007 | 4822 130 30621 | 1N4148 |
| 6008 | 4822 130 30621 | 1N4148 |
| 6009 | 4822 130 11397 | BAS316 |
| 6010 | 4822 130 11397 | BAS316 |
| 6011 | 4822 130 11397 | BAS316 |
| 6012 | 4822 130 34281 | BZX79-B15 |
| 6013 | 4822 130 34281 | BZX79-B15 |
| 6018 | 4822 130 11397 | BAS316 |
| 6019 | 4822 130 11397 | BAS316 |
| 6021 | 4822 130 32961 | BYV28-200 |
| 6021 | 9340 550 66112 | BYV28-200/24 |
| 6022 | 4822 130 11397 | BAS316 |
| 6023 | 4822 130 11397 | BAS316 |
| 6027 | 4822 130 30621 | 1N4148 |
| 6028 | 4822 130 30621 | 1N4148 |
| 6031 | 9322 129 37685 | BZM55-C5V6 |
| 6032 | 9322 129 37685 | BZM55-C5V6 |
| 6033 | 4822 130 11594 | BZX284-C47 |
| 6034 | 4822 130 11397 | BAS316 |
| 6035 | 4822 130 11397 | BAS316 |
| 6041 | 9322 167 08687 | STTH2003CF |
| 6042 | 9322 150 18685 | BZX384-C47 |
| 6044 | 9322 167 08687 | STTH2003CF |
| 6045 | 4822 130 32961 | BYV28-200 |
| 6045 | 9340 550 66112 | BYV28-200/24 |
| 6050 | 4822 130 31024 | BZX79-B18 |
| 6053 | 4822 130 42488 | BYD33D |
| 6054 | 4822 130 42488 | BYD33D |
| 6055 | 4822 130 42488 | BYD33D |
| 6061 | 4822 130 31024 | BZX79-B18 |
| 6075 | 9336 018 60133 | BZT03-C300 |
| 6077 | 9336 018 60133 | BZT03-C300 |
| 6082 | 4822 130 11397 | BAS316 |
| 6086 | 4822 130 83757 | BAS216 |
| 6095 | 4822 130 11397 | BAS316 |
| 6111 | 4822 130 11397 | BAS316 |
| 6112 | 4822 130 11397 | BAS316 |
| 6113 | 4822 130 11397 | BAS316 |
| 6117 | 4822 130 11152 | UDZ18B |
| 6120 | 4822 130 11596 | BYW29EX-200 |
| 6123 | 4822 130 11397 | BAS316 |
| 6132 | 4822 130 11397 | BAS316 |
| 6133 | 4822 130 11397 | BAS316 |
| 6142 | 4822 130 42488 | BYD33D |
| 6142 | 9340 550 66112 | BYV28-200/24 |
| 6202 | 4822 130 11397 | BAS316 |
| 6205 | 4822 130 11152 | UDZ18B |
| 6206 | 4822 130 11397 | BAS316 |
| 6211 | 9322 128 65685 | RS1G |
| 6213 | 4822 130 11397 | BAS316 |
| 6216 | 4822 130 11152 | UDZ18B |
| 6224 | 9322 164 40682 | STPS20L40CF |
| 6224 | 9322 173 47687 | STPS20L40CFP |
| 6225 | 9322 164 40682 | STPS20L40CF |
| 6225 | 9322 173 47687 | STPS20L40CFP |
| 6230 | 4822 130 42488 | BYD33D |
| 6230 | 5322 130 31938 | BYV27-200 |
| 6230 | 9340 550 66112 | BYV28-200/24 |
| 6232 | 4822 130 11522 | UDZ15B |
| 6260 | 4822 130 11421 | BT151X-500R |
| 6267 | 9322 161 77682 | SB540L-7024 |
| 6290 | 4822 130 11596 | BYW29EX-200 |
| 6291 | 9322 131 78682 | D4SBL20 |
| 6293 | 4822 130 11596 | BYW29EX-200 |
| 6312 | 4822 130 11397 | BAS316 |
| 6312 | 4822 130 11528 | 1PS76SB10 |
| 6313 | 4822 130 11528 | 1PS76SB10 |
| 6314 | 4822 130 11397 | BAS316 |
| 6321 | 4822 130 11397 | BAS316 |
| 6321 | 4822 130 11528 | 1PS76SB10 |
| 6322 | 4822 130 11528 | 1PS76SB10 |
| 6324 | 4822 130 11397 | BAS316 |
| 6325 | 4822 130 11416 | PDZ6.8B |
| 6333 | 4822 130 11397 | BAS316 |
| 6333 | 4822 130 11528 | 1PS76SB10 |
| 6334 | 4822 130 11528 | 1PS76SB10 |
| 6335 | 4822 130 11397 | BAS316 |
| 6340 | 4822 130 11397 | BAS316 |
| 6340 | 4822 130 11528 | 1PS76SB10 |
| 6341 | 4822 130 11528 | 1PS76SB10 |
| 6342 | 4822 130 11397 | BAS316 |
| 6344 | 4822 130 10838 | UDZ3.3B |
| 6347 | 4822 130 10654 | BAT254 |
| 6348 | 4822 130 20297 | BT169B |
| 6362 | 4822 130 11397 | BAS316 |
| 6364 | 4822 130 11397 | BAS316 |
| 6365 | 4822 130 11397 | BAS316 |
| 6375 | 4822 130 11397 | BAS316 |
| 6376 | 4822 130 11397 | BAS316 |
| 6378 | 4822 130 11528 | 1PS76SB10 |
| 6390 | 4822 130 11397 | BAS316 |
| 6460 | 4822 130 11397 | BAS316 |
| 6461 | 4822 130 11397 | BAS316 |
| 6470 | 4822 130 11397 | BAS316 |
| 6471 | 4822 130 11397 | BAS316 |
| 6501 | 9336 018 60133 | BZT03-C300 |
| 6502 | 9336 018 60133 | BZT03-C300 |
| 6503 | 9322 128 65685 | RS1G |
| 6504 | 9322 128 65685 | RS1G |
| 6505 | 9322 161 76682 | SB340L-7024 |
| 6510 | 9322 099 61685 | BYG10J |
| 6511 | 9322 099 61685 | BYG10J |
| 6512 | 9322 099 61685 | BYG10J |
| 6513 | 9322 099 61685 | BYG10J |

| | | |
|---|---|---|
| 6520 | 4822 130 11397 | BAS316 |
| 6530 | 4822 130 11152 | UDZ18B |
| 6531 | 4822 130 11152 | UDZ18B |
| 6600 | 9322 131 67679 | GBU8JL-7000 |
| 6605 | 4822 130 80137 | 1N5406 |
| 6605 | 9322 161 81682 | 1N5406L-7024 |
| 6606 | 4822 130 80137 | 1N5406 |
| 6606 | 9322 161 81682 | 1N5406L-7024 |
| 6608 | 4822 130 11397 | BAS316 |
| 6609 | 4822 130 32152 | BZT03-C18 |
| 6611 | 3139 120 52021 | BYV29X-500 |
| 6611 | 4822 130 83796 | BYV29F-500 |
| 6640 | 9339 680 20115 | PRLL5819 |
| 6641 | 4822 130 11397 | BAS316 |
| 6642 | 9339 680 20115 | PRLL5819 |
| 6643 | 4822 130 11152 | UDZ18B |
| 6651 | 9339 680 20115 | PRLL5819 |
| 6652 | 9339 680 20115 | PRLL5819 |
| 6653 | 4822 130 11666 | BZX284-C8V2 |
| 6653 | 9322 129 39685 | BZM55-C8V2 |
| 6654 | 4822 130 11397 | BAS316 |
| 6660 | 9322 128 65685 | RS1G |
| 6661 | 9322 128 65685 | RS1G |
| 6663 | 4822 130 11397 | BAS316 |
| 6665 | 9339 680 20115 | PRLL5819 |
| 6700 | 4822 130 11152 | UDZ18B |
| 6703 | 9339 680 20115 | PRLL5819 |
| 6706 | 4822 130 11152 | UDZ18B |
| 6709 | 9339 680 20115 | PRLL5819 |

| | | |
|---|---|---|
| 7001 | 9322 108 21682 | MC34067P |
| 7002⚠ | 9322 149 04682 | TCET1102 |
| 7003⚠ | 9322 149 04682 | TCET1102 |
| 7005 | 9322 164 01687 | STU16NB50I |
| 7005 | 9322 192 18687 | STP15NK50ZFP |
| 7006 | 9322 164 01687 | STU16NB50I |
| 7006 | 9322 192 18687 | STP15NK50ZFP |
| 7007 | 4822 130 40854 | BC327 |
| 7008 | 4822 130 40854 | BC327 |
| 7009 | 3198 010 42310 | BC847BW |
| 7009 | 9340 217 70115 | BC847BW |
| 7010 | 4822 209 81397 | TL431CLPST |
| 7011 | 4822 209 81397 | TL431CLPST |
| 7017 | 3198 010 42320 | BC857BW |
| 7017 | 5322 130 42756 | BC857C |
| 7017 | 9340 218 50115 | BC857BW |
| 7018 | 3198 010 42310 | BC847BW |
| 7018 | 9340 217 70115 | BC847BW |
| 7020 | 9335 671 30126 | BC517 |
| 7021 | 9335 671 30126 | BC517 |
| 7022 | 3198 010 42310 | BC847BW |
| 7022 | 9340 217 70115 | BC847BW |
| 7042 | 4822 130 41646 | BF423 |
| 7050 | 9340 557 17118 | PSMN035-150B |
| 7052 | 9322 165 02668 | IRFR18N15D |
| 7058 | 3198 010 42310 | BC847BW |
| 7058 | 9340 217 70115 | BC847BW |
| 7059 | 4822 130 41646 | BF423 |
| 7059 | 4822 130 41782 | BF422 |
| 7090 | 3198 010 42320 | BC857BW |
| 7090 | 5322 130 42756 | BC857C |
| 7090 | 9340 218 50115 | BC857BW |
| 7091 | 3198 010 42320 | BC857BW |
| 7091 | 5322 130 42756 | BC857C |
| 7091 | 9340 218 50115 | BC857BW |
| 7092 | 4822 130 41246 | BC327-25 |
| 7093 | 4822 209 80591 | LM317T |
| 7110 | 4822 130 41646 | BF423 |
| 7111 | 4822 130 41646 | BF423 |
| 7112 | 9352 673 56112 | TEA1507P/N1 |
| 7117 | 9340 557 17118 | PSMN035-150B |
| 7120 | 9322 149 04682 | TCET1102 |
| 7121 | 4822 209 81397 | TL431CLPST |
| 7130 | 4822 209 81397 | TL431CLPST |
| 7134 | 3198 010 42310 | BC847BW |
| 7134 | 9340 217 70115 | BC847BW |
| 7135 | 3198 010 42310 | BC847BW |
| 7140 | 9340 425 10115 | BC857BS |
| 7142 | 4822 130 41646 | BF423 |
| 7200 | 4822 130 63316 | BSN304 |
| 7202 | 5322 130 63289 | BSN20 |
| 7202 | 9965 000 04199 | BSN20 |
| 7212 | 9352 673 56112 | TEA1507P/N1 |
| 7217 | 9340 557 18127 | PSMN070-200P |
| 7220 | 9322 149 04682 | TCET1102 |
| 7227 | 4822 209 81397 | TL431CLPST |
| 7230 | 4822 209 12334 | L4940V85 |
| 7260 | 9322 166 31682 | IC L4973V3.3 |
| 7304 | 4822 209 81397 | TL431CLPST |
| 7308 | 4822 209 60177 | LM339D |
| 7326 | 3198 010 42310 | BC847BW |
| 7326 | 9340 217 70115 | BC847BW |
| 7327 | 3198 010 42310 | BC847BW |
| 7327 | 9340 217 70115 | BC847BW |
| 7330 | 4822 209 60177 | LM339D |
| 7341 | 3198 010 42320 | BC857BW |
| 7341 | 5322 130 42756 | BC857C |
| 7341 | 9340 218 50115 | BC857BW |
| 7348 | 3198 010 42310 | BC847BW |
| 7348 | 9340 217 70115 | BC847BW |
| 7351 | 3198 010 42310 | BC847BW |
| 7351 | 9340 217 70115 | BC847BW |
| 7352 | 3198 010 42310 | BC847BW |
| 7352 | 9340 217 70115 | BC847BW |
| 7362 | 3198 010 42310 | BC847BW |
| 7362 | 9340 217 70115 | BC847BW |
| 7366 | 4822 209 63709 | LM324D |
| 7370 | 5322 209 33172 | PCF8574AT |
| 7371 | 4822 130 40959 | BC547B |
| 7375 | 3198 010 42310 | BC847BW |
| 7375 | 9340 217 70115 | BC847BW |
| 7376 | 3198 010 42310 | BC847BW |
| 7376 | 9340 217 70115 | BC847BW |
| 7389 | 3198 010 42320 | BC857BW |
| 7389 | 5322 130 42756 | BC857C |
| 7389 | 9340 218 50115 | BC857BW |
| 7391 | 3198 010 42320 | BC857BW |
| 7391 | 5322 130 42756 | BC857C |
| 7391 | 9340 218 50115 | BC857BW |
| 7393 | 3198 010 42310 | BC847BW |
| 7393 | 9340 217 70115 | BC847BW |
| 7460 | 4822 130 42804 | BC817-25 |
| 7460 | 9340 219 30115 | BC817-25W |
| 7465 | 3198 010 42320 | BC857BW |
| 7465 | 5322 130 42756 | BC857C |
| 7465 | 9340 218 50115 | BC857BW |
| 7470 | 4822 130 42804 | BC817-25 |
| 7470 | 9340 219 30115 | BC817-25W |
| 7500 | 9322 037 99682 | TNY256P |
| 7501⚠ | 9322 149 04682 | TCET1102 |
| 7502 | 4822 209 14933 | TL431IZ |
| 7502 | 4822 209 81397 | TL431CLPST |
| 7530 | 9322 157 95668 | STD16NE06L |
| 7531 | 9322 157 95668 | STD16NE06L |
| 7540 | 4822 209 80817 | L7805CV |
| 7608 | 5322 130 44593 | BC369 |
| 7610 | 9322 130 47687 | STY34NB50 |
| 7640 | 4822 130 63316 | BSN304 |
| 7641 | 4822 130 40981 | BC337-25 |
| 7650 | 9322 130 69682 | IC MC33368P |
| 7654 | 3198 010 42320 | BC857BW |
| 7654 | 5322 130 42756 | BC857C |
| 7654 | 9340 218 50115 | BC857BW |
| 7660 | 5322 209 71759 | MCT7815CT |
| 7700 | 9322 115 29668 | SI9433DY |
| 7701 | 3198 010 42310 | BC847BW |
| 7701 | 9340 217 70115 | BC847BW |
| 7706 | 9322 115 29668 | SI9433DY |
| 7707 | 3198 010 42310 | BC847BW |
| 7707 | 9340 217 70115 | BC847BW |

## Power Supply Panel FM33 AA [P]

### Various

| | | |
|---|---|---|
| 0008 | 4822 265 11253 | Fuse holder 2p |
| 0010 | 3122 421 60171 | Spring |
| 0011 | 3122 421 60171 | Spring |
| 0015 | 4822 695 00005 | Insulating plate |
| 0016 | 3122 121 67211 | Clip max247 |
| 0017 | 3122 121 67201 | Clip large |
| 0020 | 3122 121 67191 | Clip small |
| 0021 | 3122 121 67191 | Clip small |
| 0022 | 3122 121 67191 | Clip small |
| 0023 | 3122 121 67191 | Clip small |
| 0024 | 3122 121 67191 | Clip small |
| 0025 | 3122 121 67191 | Clip small |
| 0206 | 3104 308 78231 | Transistor cooling clip |
| 0302 | 2422 025 10769 | Connector 9P |
| 0305 | 2422 025 10772 | Connector 12P m |
| 0306 | 2422 025 08149 | Connector 6p m |
| 0307 | 2422 025 17759 | Connector 20P f |
| 0308 | 4822 265 20723 | Connector 2p m |
| 0319 | 2422 025 10668 | Connector 13P m |
| 0323 | 2422 025 15085 | Connector 10P m |
| 0333 | 2422 025 12827 | Connector 9P m 3.96 |
| 0342 | 4822 267 10618 | Connector 7P |
| 0352 | 4822 267 10618 | Connector 7P |
| 1082⚠ | 2422 086 10849 | Fuse F1A 250V |
| 1083⚠ | 2422 086 10849 | Fuse F1A 250V |
| 1084⚠ | 2422 086 10849 | Fuse F1A 250V |
| 1110⚠ | 4822 071 55002 | Fuse T5A 250V |
| 1200⚠ | 9965 000 07788 | Fuse T2A 250V |
| 1260⚠ | 2122 662 00107 | Fuse RR60-075 A |
| 1400⚠ | 4822 253 30467 | Fuse 6.3A |
| 1401⚠ | 9965 000 07788 | Fuse T2A 250V |
| 1402 | 4822 252 60151 | Sparkgap dsp501 |
| 1450⚠ | 4822 280 10382 | SDT-SS-109DM |
| 1460⚠ | 4822 280 10382 | SDT-SS-109DM |

| | | |
|---|---|---|
| 2000 | 2020 554 90169 | 470pF 20% 250V |
| 2002 | 3198 030 72290 | 22µF 20% 35V |
| 2003 | 4822 124 12056 | 1000µF 20% 35V |
| 2004 | 2020 552 96513 | 100pF 1% 50% 0603 |
| 2005 | 2020 552 96513 | 100pF 1% 50% 0603 |
| 2006 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2007 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2008 | 5322 126 11583 | 10nF 10% 50V 0603 |
| 2009 | 3198 030 82280 | 2.2µF 20% 50V |
| 2010 | 5322 126 11583 | 10nF 10% 50V 0603 |
| 2011 | 2222 375 24153 | 15nF 5% 1kV |
| 2012 | 4822 126 11254 | 330pF 10% 2kV |
| 2013 | 4822 126 11254 | 330pF 10% 2kV |
| 2014 | 4822 126 13862 | 1.5nF 10% 2kV |
| 2015 | 5322 126 11583 | 10nF 10% 50V 0603 |
| 2016 | 3198 030 82280 | 2.2µF 20% 50V |
| 2017 | 2222 375 24153 | 15nF 5% 1kV |
| 2018 | 2020 552 96513 | 100pF 1% 50% 0603 |
| 2020 | 2020 024 90737 | 3300µF 20% 100V |
| 2021 | 2020 024 90737 | 3300µF 20% 100V |
| 2022 | 4822 124 12056 | 1000µF 20% 35V |
| 2023 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2024 | 5322 126 11579 | 3.3nF 10% 63V |
| 2025 | 2222 601 55649 | 100nF 10% 100V 1206 |
| 2026 | 4822 126 14238 | 2.2nF 50V 0603 |
| 2027 | 3198 017 31530 | 15nF 20% 50V 0603 |
| 2028 | 2238 930 11541 | 220pF 5% 200V |
| 2029 | 4822 126 13883 | 220pF 5% 50V |
| 2030 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2031 | 2222 601 55649 | 100nF 10% 100V 1206 |
| 2032 | 2238 916 15641 | 22nF 10% 25V 0603 |
| 2033 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2034 | 4822 126 11979 | 27pF 5% 2KV |
| 2035 | 2238 586 15623 | 1nF 10% 50V 0603 |
| 2036 | 2238 916 15641 | 22nF 10% 25V 0603 |
| 2038 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2040 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2044 | 2238 930 11541 | 220pF 5% 200V |
| 2045 | 4822 126 13883 | 220pF 5% 50V |
| 2047 | 3198 030 72290 | 22µF 20% 35V |
| 2050 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2054 | 2238 606 11536 | 100pF 5% 100V |
| 2055 | 2238 606 11547 | 680pF 5% 680V |
| 2058 | 4822 124 40756 | 1µF20% 100V |
| 2059 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2061 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2090 | 2020 021 91729 | 4.7µF 20% 35V |
| 2111 | 4822 126 13883 | 220pF 5% 50V |
| 2112 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2113 | 4822 124 12379 | 220µF 25V |
| 2114 | 4822 126 13473 | 220nF 80-20% 50V |
| 2117 | 2222 780 15656 | 330nF 10% 16V |
| 2118 | 4822 126 13449 | 1nF 10% 2KV |
| 2121 | 2020 024 90736 | 2200µF 20% 100V |
| 2122 | 4822 121 51319 | 1µF 10% 63V |
| 2123 | 5322 126 11579 | 3.3nF 10% 63V |
| 2126 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2133 | 3198 030 72290 | 22µF 20% 35V |
| 2138 | 4822 126 14472 | 1µF 10% 10V 0805 |
| 2203 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2205 | 3198 030 82280 | 2.2µF 20% 50V |
| 2210 | 4822 124 80151 | 47µF 20% 16V |
| 2211 | 4822 126 13883 | 220pF 5% 50V |
| 2212 | 4822 126 13879 | 220nF 20% 16V |
| 2217 | 2222 780 15656 | 330nF 10% 16V |
| 2218 | 2222 375 90141 | 3.3nF 1.6kV 5% |
| 2222 | 2020 552 94427 | 100pF 5% 50v 0603 |
| 2223 | 2020 552 94427 | 100pF 5% 50v 0603 |
| 2225 | 2020 021 91551 | 2200µF 20% 25V |
| 2226 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2227 | 2020 552 94427 | 100pF 5% 50v 0603 |
| 2228 | 2022 552 05617 | 10µF 5% 6.3V 1206 |
| 2229 | 4822 124 80151 | 47µF 20% 16V |
| 2230 | 4822 124 80151 | 47µF 20% 16V |
| 2231 | 4822 124 80151 | 47µF 20% 16V |
| 2232 | 2020 552 94427 | 100pF 5% 50v 0603 |
| 2260 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2261 | 5322 126 11578 | 1nF 10% 50V 0603 |
| 2262 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2263 | 5322 126 11578 | 1nF 10% 50V 0603 |
| 2264 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2265 | 2022 552 05618 | 4.7µF 10% 10V 1206 |
| 2266 | 4822 126 14247 | 1.5nF 50V 0603 |
| 2267 | 4822 126 13879 | 220nF 20% 16V |

| | | |
|---|---|---|
| 2268 | 2022 552 05616 | 4.7µF 5% 6.3V |
| 2269 | 2022 552 05616 | 4.7µF 5% 6.3V |
| 2270 | 4822 126 13193 | 4.7nF 10% 63V |
| 2271 | 3198 017 31530 | 15nF 20% 50V 0603 |
| 2272 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2273 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2290 | 5322 126 11583 | 10nF 10% 50V 0603 |
| 2291 | 4822 126 13883 | 220pF 5% 50V |
| 2292 | 3198 026 51020 | 1000µF 50V 20% |
| 2293 | 4822 126 13883 | 220pF 5% 50V |
| 2294 | 3198 026 51020 | 1000µF 50V 20% |
| 2303 | 2020 552 96683 | 220nF 10% 50V |
| 2304 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2305 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2306 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2316 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2322 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2324 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2343 | 3198 030 82280 | 2.2µF 20% 50V |
| 2350 | 4822 124 12095 | 100µF 20% 16V |
| 2352 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2364 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2366 | 4822 126 14585 | 100nF 10% 50V |
| 2369 | 4822 126 14585 | 100nF 10% 50V |
| 2370 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2371 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2372 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2373 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2374 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2375 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2376 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2380 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2381 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2385 | 3198 017 41050 | 1µF 10V 0603 |
| 2393 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2396 | 2020 552 96683 | 220nF 10% 50V |
| 2400 | 2222 338 22474 | 470nF 20% 275V |
| 2401 | 2222 338 22474 | 470nF 20% 275V |
| 2404 | 4822 126 14525 | 47pF 5% 1kV |
| 2405 | 2020 554 90169 | 470pF 20% 250V |
| 2406 | 4822 126 14525 | 47pF 5% 1kV |
| 2407 | 2020 554 90169 | 470pF 20% 250V |
| 2410 | 2222 338 22474 | 470nF 20% 275V |
| 2412 | 2020 554 90169 | 470pF 20% 250V |
| 2465 | 4822 124 12095 | 100µF 20% 16V |
| 2503 | 2020 024 90708 | 47µF 400V 20% |
| 2504 | 5322 126 11578 | 1nF 10% 50V 0603 |
| 2505 | 4822 124 12056 | 1000µF 20% 35V |
| 2507 | 2020 552 94427 | 100pF 5% 50v 0603 |
| 2508 | 4822 124 12095 | 100µF 20% 16V |
| 2509 | 2020 552 94427 | 100pF 5% 50v 0603 |
| 2510 | 2020 021 91506 | 1000µF 20% 16V |
| 2511 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2512 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2513 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2530 | 2022 552 05636 | 10µF 10% 16V 1210 |
| 2532 | 4822 124 12095 | 100µF 20% 16V |
| 2533 | 4822 124 12095 | 100µF 20% 16V |
| 2540 | 4822 124 12095 | 100µF 20% 16V |
| 2541 | 4822 124 12095 | 100µF 20% 16V |
| 2600 | 4822 122 33799 | 1nF 10% 1kV |
| 2601 | 4822 122 33799 | 1nF 10% 1kV |
| 2605 | 2222 479 90086 | 1µF 400V 5% |
| 2608 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2610 | 4822 121 70584 | 1,8nF 5% 2KV |
| 2611 | 2222 375 90276 | 220pF 5% 2kV |
| 2612 | 5322 126 11578 | 1nF 10% 50V 0603 |
| 2613 | 5322 126 11578 | 1nF 10% 50V 0603 |
| 2616 | 4822 124 12415 | 220µF 20% 400V |
| 2617 | 4822 124 12415 | 220µF 20% 400V |
| 2640 | 4822 126 13881 | 470pF 5% 50V |
| 2642 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2651 | 5322 126 11583 | 10nF 10% 50V 0603 |
| 2653 | 4822 126 14241 | 330pF 50V 0603 |
| 2654 | 4822 124 80151 | 47µF 20% 16V |
| 2655 | 4822 126 14472 | 1µF 10% 10V 0805 |
| 2656 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2660 | 4822 126 13881 | 470pF 5% 50V |
| 2661 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2662 | 4822 124 80061 | 1000µF 20% 25V |
| 2663 | 4822 124 40255 | 100µF 20% 63V |
| 2664 | 4822 124 40255 | 100µF 20% 63V |
| 2665 | 4822 126 13881 | 470pF 5% 50V |
| 2666 | 4822 126 13193 | 4.7nF 10% 63V |
| 2670 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2671 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2672 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2673 | 2022 554 04102 | 4.7nF 10% 500V 1210 |
| 2674 | 2022 554 04103 | 10nF 10% 500V 1210 |
| 2675 | 2022 554 04103 | 10nF 10% 500V 1210 |

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| | | |
|---|---|---|
| 3003 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3004 | 4822 051 30153 | 15kΩ 5% 0.062W |
| 3005 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3006 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3007 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3008 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3009 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3010 | 4822 051 30153 | 15kΩ 5% 0.062W |
| 3011 | 4822 051 30561 | 560Ω 5% 0.062W |
| 3012 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3013 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3014 | 4822 116 52191 | 33Ω 5% 0.5W |
| 3015 | 4822 116 52176 | 10Ω 5% 0.5W |
| 3016 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3017 | 4822 116 52191 | 33Ω 5% 0.5W |
| 3018 | 4822 116 52176 | 10Ω 5% 0.5W |
| 3019 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3020 | 4822 051 30563 | 56kΩ 5% 0.062W |
| 3021 | 4822 053 11688 | 6.8Ω 5% 2W |
| 3022 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3023 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3024 | 2322 734 67503 | 75kΩ 1% 0.062W 0805 |
| 3025 | 5322 117 13046 | 1.8kΩ 1% 0.063W 0603 |
| 3027 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3028 | 4822 117 10362 | 7.5kΩ 1% 0,1W |
| 3029 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3030 | 4822 051 30183 | 18kΩ 5% 0.062W |
| 3031 | 2322 704 61103 | 11kΩ 1% 0603 |
| 3032 | 2322 704 61103 | 11kΩ 1% 0603 |
| 3033 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3034 | 4822 051 30221 | 220Ω 5% 0.062W |
| 3037 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3038 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3039 | 4822 051 30105 | 1MΩ 5% 0.062W |
| 3040 | 4822 117 10837 | 100kΩ 1% 0.1W |
| 3041 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3042 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3043 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3044 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3045 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3046 | 4822 053 20565 | 5.6MΩ 5% 0.25W |
| 3047 | 4822 051 30154 | 150kΩ 5% 0.062W |
| 3048 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3049 | 4822 051 30123 | 12kΩ 5% 0.062W |
| 3050 | 4822 052 10398 | 3.9Ω 5% 0,33W |
| 3051 | 4822 051 20399 | 39Ω 5% 0.1W |
| 3053 | 2322 662 93131 | 10Ω PTC |
| 3054 | 4822 117 10833 | 10kΩ 1% 0.1W |
| 3056 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3057 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3058 | 4822 051 20105 | 1MΩ 5% 0.1W |
| 3062 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3064 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3065 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3066 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3067 | 4822 051 30153 | 15kΩ 5% 0.062W |
| 3070 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3071 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3075 | 4822 051 20105 | 1MΩ 5% 0.1W |
| 3076 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3077 | 4822 051 20105 | 1MΩ 5% 0.1W |
| 3078 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3080 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3081 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3083 | 4822 051 10102 | 1kΩ 2% 0.25W |
| 3084 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3085 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3086 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3087 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3088 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3090 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3091 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3092 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3093 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3095 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3096 | 4822 051 30562 | 5.6kΩ 5% 0.063W 0603 |
| 3097 | 4822 117 12968 | 820Ω 5% 0.62W |
| 3106 | 4822 117 12955 | 2.7kΩ 1% 0.1W 0805 |
| 3107 | 4822 117 12955 | 2.7kΩ 1% 0.1W 0805 |
| 3108 | 4822 117 12955 | 2.7kΩ 1% 0.1W 0805 |
| 3109 | 4822 117 12955 | 2.7kΩ 1% 0.1W 0805 |
| 3110 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3112 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3113 | 4822 051 30474 | 470kΩ 5% 0.062W |
| 3114 | 4822 051 20564 | 560kΩ 5% 0.1W |
| 3115 | 4822 117 12891 | 220kΩ 1% 0.063W 0603 |
| 3116 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3117 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3118 | 2122 118 06084 | 0.051Ω 5% 1W 2512 |
| 3120 | 4822 117 12903 | 1.8kΩ 1% 0.063W 0603 |
| 3121 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3122 | 2322 734 67503 | 75kΩ 1% 0.062W 0805 |
| 3123 | 4822 117 10965 | 18kΩ 1% 0.1W |
| 3124 | 2322 704 67502 | 7.5K 1% 0,5W |
| 3125 | 2322 704 67502 | 7.5K 1% 0,5W |
| 3126 | 5322 117 13037 | 2.2kΩ 0.063W 0603 |
| 3128 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3130 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3131 | 2322 704 61103 | 11kΩ 1% 0603 |
| 3132 | 4822 051 30221 | 220Ω 5% 0.062W |
| 3133 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3134 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3135 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3136 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3138 | 4822 117 11503 | 220Ω 1% 0.1W |
| 3139 | 4822 117 11503 | 220Ω 1% 0.1W |
| 3140 | 2322 734 67503 | 75kΩ 1% 0.062W 0805 |
| 3141 | 2322 734 67503 | 75kΩ 1% 0.062W 0805 |
| 3142 | 5322 117 12487 | 1kΩ 1% 0.125W |
| 3143 | 4822 053 11472 | 4kΩ 5% 2W |
| 3145 | 2322 763 65107 | 0.51Ω 1% 1W 2512 |
| 3146 | 2322 763 65107 | 0.51Ω 1% 1W 2512 |
| 3147 | 2322 704 61103 | 11kΩ 1% 0603 |
| 3200 | 2322 730 61224 | 220kΩ 5% 0.062W 0805 |
| 3202 | 4822 051 30479 | 47Ω 5% 0.062W |
| 3203 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3204 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3205 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3206 | 4822 117 12955 | 2.7kΩ 1% 0.1W 0805 |
| 3207 | 4822 117 12955 | 2.7kΩ 1% 0.1W 0805 |
| 3208 | 4822 117 12955 | 2.7kΩ 1% 0.1W 0805 |
| 3209 | 4822 117 12955 | 2.7kΩ 1% 0.1W 0805 |
| 3212 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3213 | 4822 051 20394 | 390kΩ 5% 0.1W |
| 3214 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3216 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3217 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3218 | 2122 118 06084 | 0.051Ω 5% 1W 2512 |
| 3224 | 5322 117 13028 | 12kΩ 1% 0.063W 0603 |
| 3225 | 2322 704 61103 | 11kΩ 1% 0603 |
| 3226 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3228 | 4822 051 30151 | 150Ω 5% 0.062W |
| 3260 | 4822 051 30109 | 10Ω 5% 0.062W |
| 3261 | 4822 051 30681 | 680Ω 5% 0.062W |
| 3263 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3264 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3266 | 4822 051 30272 | 2.7kΩ 5% 0.062W |
| 3267 | 5322 117 13062 | 390Ω 1% 0.063W 0603 |
| 3268 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3270 | 4822 051 30681 | 680Ω 5% 0.062W |
| 3271 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3272 | 5322 117 13018 | 1kΩ 1% 0.063W 0603 |
| 3292 | 4822 051 30561 | 560Ω 5% 0.062W |
| 3300 | 4822 117 13579 | 220kΩ 1% 0.1W 0805 |
| 3301 | 4822 117 13579 | 220kΩ 1% 0.1W 0805 |
| 3302 | 2312 916 71004 | 100kΩ 1% |
| 3303 | 2312 916 71004 | 100kΩ 1% |
| 3304 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3305 | 2312 916 76202 | 6.2kΩ 1% |
| 3306 | 2322 704 61103 | 11kΩ 1% 0603 |
| 3307 | 5322 117 13028 | 12kΩ 1% 0.063W 0603 |
| 3308 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3310 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3311 | 4822 117 13579 | 220kΩ 1% 0.1W 0805 |
| 3312 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3313 | 2322 704 67502 | 7.5K 1% 0,5W |
| 3316 | 2312 916 77502 | 7.5kΩ 1% |
| 3317 | 2322 704 67502 | 7.5K 1% 0,5W |
| 3319 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3320 | 2322 704 61103 | 11kΩ 1% 0603 |
| 3321 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3322 | 5322 117 13042 | 3.9kΩ 1% 0.063W 0603 |
| 3323 | 4822 117 10833 | 10kΩ 1% 0.1W |
| 3324 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3325 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3326 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3327 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3328 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3331 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3332 | 4822 117 11144 | 3.9kΩ 1% 0.1W |
| 3333 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3334 | 4822 117 12955 | 2.7kΩ 1% 0.1W 0805 |
| 3335 | 4822 116 83933 | 15kΩ 1% 0.1W |
| 3339 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3340 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3341 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3342 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3343 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3344 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3345 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3347 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3348 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3349 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3350 | 4822 051 30472 | 4.7kΩ 5% 0.062W |

| | | |
|---|---|---|
| 3351 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3352 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3353 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3354 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3358 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3359 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3360 | 4822 117 11817 | 1.2kΩ 1% 1/16W |
| 3361 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3363 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3364 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3368 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3369 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3370 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3371 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3372 | 9337 224 50116 | Temp sens. KTY81-210 |
| 3373 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3374 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3376 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3377 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3378 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3380 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3381 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3382 | 5322 117 13039 | 222kΩ 1% 0.063W 0603 |
| 3385 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3386 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3387 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3388 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3389 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3390 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3391 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3392 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3393 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3394 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3395 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3396 | 2312 916 71004 | 100kΩ 1% |
| 3397 | 2312 916 71004 | 100kΩ 1% |
| 3400▲ | 2322 595 90021 | VDR 1mA/495V 850V |
| 3401 | 4822 117 10118 | 1MΩ 5% 0,5W |
| 3404 | 4822 116 83872 | 220Ω 5% 0.5W |
| 3450 | 2322 662 93131 | 10Ω PTC |
| 3451 | 2322 662 93131 | 10Ω PTC |
| 3452 | 2122 612 00051 | NTC 1Ω 20% |
| 3453 | 2122 612 00051 | NTC 1Ω 20% |
| 3460 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3461 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3463 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3465 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3467 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3469 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3470 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3501 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3502 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3503 | 5322 117 13026 | 4.7kΩ 1% 0.063W 0603 |
| 3504 | 5322 117 13024 | 33kΩ 1% 0.063W 0603 |
| 3505 | 4822 117 11139 | 1.5kΩ 1% 0.1W |
| 3506 | 2322 662 93131 | 10Ω PTC |
| 3508 | 2322 194 63109 | 10Ω 5% 2W |
| 3510 | 4822 051 20684 | 680kΩ 5% 0.1W |
| 3511 | 4822 051 20684 | 680kΩ 5% 0.1W |
| 3512 | 4822 051 20684 | 680kΩ 5% 0.1W |
| 3520 | 4822 051 30109 | 10Ω 5% 0.062W |
| 3530 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3603 | 4822 051 20474 | 470kΩ 5% 0.1W |
| 3604 | 4822 051 20474 | 470kΩ 5% 0.1W |
| 3605 | 4822 051 20474 | 470kΩ 5% 0.1W |
| 3608 | 4822 116 52179 | 12Ω 5% 0,5W |
| 3610 | 5322 116 53564 | 3.3Ω 5% 0.5W |
| 3611 | 4822 050 11002 | 1kΩ 1% 0.4W |
| 3614 | 2120 106 90565 | 0.1Ω 5% 1W |
| 3615 | 2120 106 90565 | 0.1Ω 5% 1W |
| 3639 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3640 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3641 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3642 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3651 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3652 | 4822 051 30105 | 1MΩ 5% 0.062W |
| 3654 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3655 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3660 | 4822 051 20391 | 390Ω 5% 0.1W |
| 3661 | 4822 051 20391 | 390Ω 5% 0.1W |
| 3663 | 4822 052 10108 | 1Ω 5% 0.33W |
| 3664 | 2322 704 62404 | 240kΩ 1% 0603 |
| 3665 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3666 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3667 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3668 | 4822 052 11102 | 1kΩ 5% 0,5W |
| 3671 | 2322 704 61103 | 11kΩ 1% 0603 |
| 3673 | 4822 052 11102 | 1kΩ 5% 0,5W |
| 3675 | 4822 117 12917 | 1Ω 5% 0.062W 0603 |
| 3676 | 5322 117 13026 | 4.7kΩ 1% 0.063W 0603 |
| 3677 | 5322 117 13029 | 47kΩ 1% 0.063W 0603 |
| 3678 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3680 | 2322 734 62704 | 270kΩ 1% 0.1W 0805 |
| 3681 | 2322 734 62704 | 270kΩ 1% 0.1W 0805 |
| 3682 | 2322 734 62704 | 270kΩ 1% 0.1W 0805 |
| 3683 | 4822 051 20334 | 330kΩ 5% 0,1W |
| 3684 | 4822 051 20334 | 330kΩ 5% 0,1W |
| 3685 | 4822 051 20334 | 330kΩ 5% 0,1W |
| 3999 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 4300 | 4822 051 30008 | Jumper 0603 |

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|---|---|---|
| 5001 | 2422 531 02444 | Transformer S13932-04Y |
| 5002▲ | 3104 308 20811 | Trans. BS42236-00B |
| 5004▲ | 3104 308 20811 | Trans. BS42236-00B |
| 5121 | 3104 308 20771 | BD21232-00 |
| 5220▲ | 3104 308 20911 | Trans. BS29238-00 |
| 5225 | 2422 535 95273 | 6.8μH 20% |
| 5229 | 4822 157 71461 | 22μH 10% |
| 5267▲ | 2422 535 94603 | 22μH 10% |
| 5290▲ | 3104 308 20761 | Trans. BD 15230-00B |
| 5291 | 4822 157 11737 | 22μH 10% |
| 5292 | 4822 157 11737 | 22μH 10% |
| 5293 | 4822 157 11737 | 22μH 10% |
| 5294 | 4822 157 11499 | BLM11P600SPT |
| 5401▲ | 3104 308 20921 | Filter DMF2807 B |
| 5402▲ | 3104 308 20921 | Filter DMF2807 B |
| 5404▲ | 3104 308 20921 | Filter DMF2807 B |
| 5500▲ | 3104 308 20781 | Transformer CE165T |
| 5505 | 4822 157 11737 | 22μH 10% |
| 5600▲ | 3104 308 20821 | Coil BS42228-00 B |
| 5612 | 4822 157 11411 | Bead 83Ω at 100MHz |
| 5660 | 4822 157 51192 | 220MH |

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|---|---|---|
| 6004 | 4822 130 11397 | BAS316 |
| 6005 | 4822 130 11397 | BAS316 |
| 6007 | 4822 130 11397 | BAS316 |
| 6008 | 4822 130 11397 | BAS316 |
| 6009 | 4822 130 11397 | BAS316 |
| 6010 | 4822 130 11397 | BAS316 |
| 6011 | 4822 130 11397 | BAS316 |
| 6018 | 4822 130 11397 | BAS316 |
| 6019 | 4822 130 11397 | BAS316 |
| 6021 | 9322 128 70685 | SMSS14 |
| 6022 | 4822 130 11397 | BAS316 |
| 6023 | 4822 130 11397 | BAS316 |
| 6027 | 4822 130 11397 | BAS316 |
| 6028 | 4822 130 11397 | BAS316 |
| 6031 | 3198 020 55680 | BZX384-C5V6 |
| 6032 | 3198 020 55680 | BZX384-C5V6 |
| 6033 | 9322 150 18685 | BZX384-C47 |
| 6034 | 4822 130 11397 | BAS316 |
| 6035 | 4822 130 11397 | BAS316 |
| 6042 | 9322 150 18685 | BZX384-C47 |
| 6044 | 9322 167 08687 | STTH2003CF |
| 6045 | 9322 128 70685 | SMSS14 |
| 6047 | 9322 128 65685 | RS1G |
| 6050 | 4822 130 11152 | UDZ18B |
| 6054 | 9340 553 52115 | BAS321 |
| 6055 | 9340 553 52115 | BAS321 |
| 6061 | 4822 130 11152 | UDZ18B |
| 6075▲ | 9340 292 80135 | BZG03-C270 |
| 6077▲ | 9340 292 80135 | BZG03-C270 |
| 6086 | 4822 130 11397 | BAS316 |
| 6095 | 4822 130 11397 | BAS316 |
| 6111 | 4822 130 11397 | BAS316 |
| 6112 | 4822 130 11397 | BAS316 |
| 6113 | 4822 130 11397 | BAS316 |
| 6117 | 4822 130 11152 | UDZ18B |
| 6120 | 4822 130 11596 | BYW29EX-200 |
| 6123 | 4822 130 11397 | BAS316 |
| 6133 | 4822 130 11397 | BAS316 |
| 6202 | 4822 130 11397 | BAS316 |
| 6204 | 3198 020 55680 | BZX384-C5V6 |
| 6205 | 4822 130 11152 | UDZ18B |
| 6206 | 4822 130 11397 | BAS316 |
| 6211 | 9322 128 65685 | RS1G |
| 6213 | 4822 130 11397 | BAS316 |
| 6216 | 4822 130 11152 | UDZ18B |
| 6225 | 9322 173 47687 | STPS20L40CFP |
| 6230 | 9322 128 70685 | SMSS14 |
| 6261 | 4822 130 11397 | BAS316 |
| 6269 | 9339 680 20115 | PRLL5819 |
| 6291 | 4822 130 81274 | MBR745 |
| 6292 | 4822 130 81274 | MBR745 |
| 6312 | 4822 130 11528 | 1PS76SB10 |
| 6313 | 4822 130 11528 | 1PS76SB10 |
| 6321 | 4822 130 11528 | 1PS76SB10 |
| 6322 | 4822 130 11528 | 1PS76SB10 |
| 6325 | 4822 130 11416 | PDZ6.8B |
| 6333 | 4822 130 11528 | 1PS76SB10 |
| 6334 | 4822 130 11528 | 1PS76SB10 |
| 6340 | 4822 130 11528 | 1PS76SB10 |
| 6341 | 4822 130 11528 | 1PS76SB10 |
| 6344 | 4822 130 10838 | UDZ3.3B |
| 6347 | 4822 130 10654 | BAT254 |
| 6348▲ | 9322 192 17685 | P0102BL |
| 6362 | 4822 130 11397 | BAS316 |
| 6364 | 4822 130 11397 | BAS316 |
| 6365 | 4822 130 11397 | BAS316 |
| 6375 | 4822 130 11397 | BAS316 |
| 6376 | 4822 130 11397 | BAS316 |
| 6378 | 4822 130 11528 | 1PS76SB10 |
| 6390 | 4822 130 11397 | BAS316 |
| 6460 | 4822 130 11397 | BAS316 |
| 6461 | 4822 130 11397 | BAS316 |
| 6470 | 4822 130 11397 | BAS316 |
| 6471 | 4822 130 11397 | BAS316 |
| 6501▲ | 9340 292 80135 | BZG03-C270 |
| 6502▲ | 9340 292 80135 | BZG03-C270 |
| 6503 | 9322 128 65685 | RS1G |
| 6504 | 9322 128 65685 | RS1G |
| 6505 | 9322 180 55668 | MBRS340 |
| 6510 | 9322 099 61685 | BYG10J |
| 6511 | 9322 099 61685 | BYG10J |
| 6512 | 9322 099 61685 | BYG10J |
| 6513 | 9322 099 61685 | BYG10J |
| 6520 | 4822 130 11397 | BAS316 |
| 6530 | 4822 130 11152 | UDZ18B |
| 6531 | 4822 130 11152 | UDZ18B |
| 6600 | 9322 131 67679 | GBU8JL-7000 |
| 6605 | 9322 192 15668 | SM S3J |
| 6606 | 9322 192 15668 | SM S3J |
| 6608 | 4822 130 11397 | BAS316 |
| 6609▲ | 9340 289 90135 | BZG03-C18 |
| 6611 | 3139 120 52021 | BYV29X-500 |
| 6640 | 9339 680 20115 | PRLL5819 |
| 6641 | 4822 130 11397 | BAS316 |
| 6642 | 9339 680 20115 | PRLL5819 |
| 6643 | 4822 130 11152 | UDZ18B |
| 6652 | 9339 680 20115 | PRLL5819 |
| 6653 | 4822 130 10837 | UDZS8.2B |
| 6654 | 4822 130 11397 | BAS316 |
| 6660 | 9322 128 65685 | RS1G |
| 6661 | 9322 128 65685 | RS1G |
| 6663 | 9339 680 20115 | PRLL5819 |
| 6665 | 9339 680 20115 | PRLL5819 |

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|---|---|---|
| 7001 | 9322 108 21682 | MC34067P |
| 7002▲ | 9322 192 38668 | TCLT1002 |
| 7003▲ | 9322 192 38668 | TCLT1002 |
| 7005 | 9322 192 18687 | STP15NK50ZFP |
| 7006 | 9322 192 18687 | STP15NK50ZFP |
| 7007 | 4822 130 40854 | BC327 |
| 7008 | 4822 130 40854 | BC327 |
| 7009 | 3198 010 42310 | BC847BW |
| 7010▲ | 9322 192 16685 | TS2431AI |
| 7011▲ | 9322 192 16685 | TS2431AI |
| 7017 | 3198 010 42320 | BC857BW |
| 7018 | 3198 010 42310 | BC847BW |
| 7020 | 9335 671 30126 | BC517 |
| 7021 | 9335 671 30126 | BC517 |
| 7022 | 3198 010 42310 | BC847BW |
| 7042▲ | 9340 308 50135 | PMST5401 |
| 7050 | 9340 557 17118 | PSMN035-150B |
| 7052 | 9322 165 02668 | IRFR18N15D |
| 7058 | 3198 010 42310 | BC847BW |
| 7059▲ | 9340 308 60135 | PMST5550 |
| 7090 | 3198 010 42320 | BC857BW |
| 7091 | 3198 010 42320 | BC857BW |
| 7092 | 3198 010 44350 | BC807-25W |
| 7093 | 4822 209 80591 | LM317T |
| 7110▲ | 9340 308 50135 | PMST5401 |
| 7112 | 9352 673 56112 | TEA1507P/N1 |
| 7117 | 9340 557 17118 | PSMN035-150B |
| 7120▲ | 9322 192 38668 | TCLT1002 |
| 7121▲ | 9322 192 16685 | TS2431AI |
| 7130▲ | 9322 192 16685 | TS2431AI |
| 7134 | 3198 010 42310 | BC847BW |
| 7140 | 9340 425 10115 | BC857BS |
| 7142▲ | 9340 308 50135 | PMST5401 |
| 7200 | 9340 565 06215 | BSH114 |
| 7202 | 9965 000 04199 | BSN20 |
| 7212 | 9352 673 56112 | TEA1507P/N1 |
| 7217 | 9340 557 18127 | PSMN070-200P |
| 7220▲ | 9322 192 38668 | TCLT1002 |
| 7227▲ | 9322 192 16685 | TS2431AI |
| 7230▲ | 9322 193 05668 | L4940D2T85 |
| 7260▲ | 9322 182 77668 | L6910 |
| 7262 | 9322 160 70668 | SI4936ADY |
| 7263 | 3198 010 42310 | BC847BW |
| 7304▲ | 9322 192 16685 | TS2431AI |
| 7308 | 4822 209 60177 | LM339D |
| 7326 | 3198 010 42310 | BC847BW |

| | | |
|---|---|---|
| 7327 | 3198 010 42310 | BC847BW |
| 7330 | 4822 209 60177 | LM339D |
| 7341 | 3198 010 42320 | BC857BW |
| 7348 | 3198 010 42310 | BC847BW |
| 7351 | 3198 010 42310 | BC847BW |
| 7352 | 3198 010 42310 | BC847BW |
| 7362 | 3198 010 42310 | BC847BW |
| 7366 | 5322 209 82941 | LM358D |
| 7370 | 5322 209 33172 | PCF8574AT |
| 7372⚠ | 9352 697 76118 | LM75ADP |
| 7375 | 3198 010 42310 | BC847BW |
| 7376 | 3198 010 42310 | BC847BW |
| 7389 | 3198 010 42320 | BC857BW |
| 7391 | 3198 010 42320 | BC857BW |
| 7393 | 3198 010 42310 | BC847BW |
| 7460 | 9340 219 30115 | BC817-25W |
| 7465 | 3198 010 42320 | BC857BW |
| 7470 | 9340 219 30115 | BC817-25W |
| 7500 | 9322 037 99682 | TNY256P |
| 7501⚠ | 9322 192 38668 | TCLT1002 |
| 7502⚠ | 9322 192 16685 | TS2431AI |
| 7530 | 9322 160 70668 | SI4936ADY |
| 7540 | 9322 156 14668 | LD1117D50 |
| 7608 | 5322 130 44593 | BC369 |
| 7610 | 9322 130 47687 | STY34NB50 |
| 7640 | 9965 000 04199 | BSN20 |
| 7641 | 9340 219 30115 | BC817-25W |
| 7650 | 9322 130 69682 | IC MC33368P |
| 7654 | 3198 010 42320 | BC857BW |
| 7661 | 5322 209 90529 | MC34063AD |

## Power Supply Panel FM24 AB [P]

### Various

| | | |
|---|---|---|
| 0006 | 4822 265 11253 | Fuse holder 2p |
| 0008 | 4822 265 11253 | Fuse holder 2p |
| 0010 | 3122 421 60171 | Spring |
| 0011 | 3122 421 60171 | Spring |
| 0015 | 4822 695 00005 | Insulating plate |
| 0016 | 3122 121 67211 | Clip max247 |
| 0017 | 3122 121 67201 | Clip large |
| 0018 | 3122 121 67201 | Clip large |
| 0020 | 3122 121 67191 | Clip small |
| 0021 | 3122 121 67191 | Clip small |
| 0022 | 3122 121 67191 | Clip small |
| 0023 | 3122 121 67191 | Clip small |
| 0024 | 3122 121 67191 | Clip small |
| 0025 | 3122 121 67191 | Clip small |
| 0027 | 3122 121 67191 | Clip small |
| 0028 | 4822 701 13088 | Transistor clamp |
| 0029 | 4822 701 13088 | Transistor clamp |
| 0040 | 2413 015 00065 | Cable tie BT18R/4B |
| 0041 | 3122 124 36011 | Thermo foam |
| 0205 | 3104 308 78231 | Transistor cooling clip |
| 0206 | 3104 308 78231 | Transistor cooling clip |
| 0302 | 2422 025 10769 | Connector 9P |
| 0305 | 2422 025 10772 | Connector 12P m |
| 0306 | 2422 025 08149 | Connector 6p m |
| 0307 | 2422 025 17154 | Connector 20P f |
| 0307 | 2422 025 17759 | Connector 20P f |
| 0308 | 4822 265 20723 | Connector 2p m |
| 0319 | 2422 025 10668 | Connector 13P m |
| 0323 | 2422 025 15085 | Connector 10P m |
| 0333 | 2422 025 12827 | Connector 9P m 3.96 |
| 0342 | 4822 267 10618 | Connector 7P |
| 0352 | 4822 267 10618 | Connector 7P |
| 0389 | 4822 267 10735 | Connector 3p m |
| 0390 | 4822 267 10735 | Connector 3p m |
| 0392 | 2422 025 09406 | Connector 4p |
| 1004⚠ | 4822 070 33152 | Fuse 3.15A |
| 1005⚠ | 4822 071 55002 | Fuse T5A 250V |
| 1041⚠ | 4822 071 55002 | Fuse T5A 250V |
| 1042⚠ | 4822 071 55002 | Fuse T5A 250V |
| 1043⚠ | 4822 071 55002 | Fuse T5A 250V |
| 1044⚠ | 4822 071 55002 | Fuse T5A 250V |
| 1045⚠ | 4822 071 55002 | Fuse T5A 250V |
| 1084⚠ | 2422 086 10849 | Fuse F1A 250V |
| 1110⚠ | 4822 071 55002 | Fuse T5A 250V |
| 1200⚠ | 9965 000 07788 | Fuse T2A 250V |
| 1260⚠ | 2122 662 00107 | Fuse RR60-075 A |
| 1400⚠ | 4822 253 30467 | Fuse 6.3A |
| 1401⚠ | 9965 000 07788 | Fuse T2A 250V |
| 1402⚠ | 4822 252 60151 | Sparkgap dsp501 |
| 1450⚠ | 4822 280 10382 | SDT-SS-109DM |
| 1460⚠ | 4822 280 10382 | SDT-SS-109DM |

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| | | |
|---|---|---|
| 2000 | 2020 554 90148 | 470pF 20% 250V |
| 2001 | 2222 151 90062 | 47µF 20% 450V |
| 2002 | 4822 124 40207 | 100µF 20% 25V |
| 2003 | 4822 124 12056 | 1000µF 20% 35V |
| 2004 | 2222 464 90017 | 200pF 2% 630V |
| 2005 | 4822 121 51288 | 100pF 630V |
| 2006 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2007 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2008 | 5322 126 11583 | 10nF 10% 50V 0603 |
| 2009 | 4822 124 22652 | 2.2µF 20% 50V |
| 2010 | 5322 126 11583 | 10nF 10% 50V 0603 |
| 2011 | 2222 375 24153 | 15nF 5% 1kV |
| 2012 | 4822 126 11254 | 330pF 10% 2kV |
| 2013 | 4822 126 11254 | 330pF 10% 2kV |
| 2014 | 4822 126 13862 | 1.5nF 10% 2kV |
| 2015 | 5322 126 11583 | 10nF 10% 50V 0603 |
| 2016 | 3198 032 64090 | 2.2µF 20% 25V |
| 2016 | 4822 124 22652 | 2.2µF 20% 50V |
| 2017 | 2222 375 24153 | 15nF 5% 1kV |
| 2020 | 2222 156 29332 | 3300µF 20% 100V 156 |
| 2021 | 2222 156 19332 | 3300µF20% 100V 156 |
| 2022 | 4822 124 12056 | 1000µF 20% 35V |
| 2023 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2024 | 5322 126 11579 | 3.3nF 10% 63V |
| 2025 | 2020 321 90041 | 180nF 250V 5% |
| 2026 | 4822 126 14238 | 2.2nF 50V 0603 |
| 2027 | 3198 017 31530 | 15nF 20% 50V 0603 |
| 2028 | 2238 930 11541 | 220pF 5% 200V |
| 2029 | 4822 126 13883 | 220pF 5% 50V |
| 2030 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2032 | 2238 916 15641 | 22nF 10% 25V 0603 |
| 2032 | 4822 126 14494 | 22nF 10% 25V 0603 |
| 2033 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2034 | 4822 126 11979 | 27pF 5% 2KV |
| 2035 | 2238 586 15623 | 1nF 10% 50V 0603 |
| 2036 | 2238 916 15641 | 22nF 10% 25V 0603 |
| 2036 | 4822 126 14494 | 22nF 10% 25V 0603 |
| 2038 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2040 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2041 | 2238 930 11541 | 220pF 5% 200V |
| 2042 | 2238 930 11541 | 220pF 5% 200V |
| 2043 | 2222 056 59222 | 2200µF 100V 20% |
| 2044 | 2238 930 11541 | 220pF 5% 200V |
| 2045 | 4822 126 13883 | 220pF 5% 50V |
| 2046 | 2238 930 11541 | 220pF 5% 200V |
| 2047 | 2238 930 11541 | 220pF 5% 200V |
| 2048 | 2238 930 11541 | 220pF 5% 200V |
| 2049 | 2238 930 11541 | 220pF 5% 200V |
| 2050 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2054 | 2238 606 11536 | 100pF 5% 100V |
| 2054 | 2238 930 11541 | 220pF 5% 200V |
| 2055 | 2020 557 90731 | 1nF 10% 250V 0805 |
| 2055 | 2238 606 11547 | 680pF 5% 680V |
| 2058 | 4822 124 40756 | 1µF20% 100V |
| 2059 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2061 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2090 | 4822 124 40769 | 4.7µF 20% 100V |
| 2110 | 5322 126 11583 | 10nF 10% 50V 0603 |
| 2111 | 4822 126 13883 | 220pF 5% 50V |
| 2112 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2113 | 4822 124 12379 | 220µF 25V |
| 2113 | 4822 124 80875 | 220µF 20% 25V |
| 2114 | 4822 126 13473 | 220nF 80-20% 50V |
| 2117 | 2222 780 15656 | 330nF 10% 16V |
| 2118 | 4822 126 13449 | 1nF 10% 2KV |
| 2121 | 2222 056 59222 | 2200µF 100V 20% |
| 2122 | 4822 121 51319 | 1µF 10% 63V |
| 2122 | 4822 124 40756 | 1µF20% 100V |
| 2123 | 5322 126 11579 | 3.3nF 10% 63V |
| 2126 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2133 | 3198 029 32290 | 22µF 20% 25V |
| 2138 | 4822 124 12084 | 1µF 20% 50V |
| 2138 | 4822 124 21913 | 1µF 20% 63V |
| 2203 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2205 | 3198 032 64090 | 2.2µF 20% 25V |
| 2210 | 4822 124 40433 | 47µF 20% 25V |
| 2211 | 4822 126 13883 | 220pF 5% 50V |
| 2212 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2212 | 4822 126 13879 | 220nF 20% 16V |
| 2217 | 2222 780 15656 | 330nF 10% 16V |
| 2218 | 2222 375 90141 | 3.3nF 1.6kV 5% |
| 2219 | 2020 021 91543 | 47µF 20% 160V |
| 2222 | 2020 552 94427 | 100pF 5% 50v 0603 |
| 2223 | 2020 552 94427 | 100pF 5% 50v 0603 |
| 2224 | 2020 021 91551 | 2200µF 20% 25V |
| 2225 | 2020 021 91551 | 2200µF 20% 25V |
| 2226 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2227 | 2020 552 94427 | 100pF 5% 50v 0603 |
| 2228 | 2020 021 91411 | 1000µF 20% 35V |
| 2229 | 5322 126 11578 | 1nF 10% 50V 0603 |
| 2230 | 5322 121 10472 | 47µF |
| 2231 | 5322 121 10472 | 47µF |
| 2232 | 2020 552 94427 | 100pF 5% 50v 0603 |
| 2260 | 4822 126 14043 | 1µF 20% 16V |
| 2261 | 2020 021 91411 | 1000µF 20% 35V |
| 2262 | 4822 126 13473 | 220nF 80-20% 50V |
| 2263 | 2222 861 15272 | 2.7nF 5% 50V 0805 |
| 2264 | 4822 126 13482 | 470nF 80-20% 16V |
| 2265 | 4822 126 14241 | 330pF 50V 0603 |
| 2266 | 2238 916 15641 | 22nF 10% 25V 0603 |
| 2266 | 4822 126 14494 | 22nF 10% 25V 0603 |
| 2267 | 5322 126 10223 | 4.7nF 10% 63V |
| 2268 | 4822 126 13473 | 220nF 80-20% 50V |
| 2269 | 2020 021 91524 | 220µF 20% 25V |
| 2270 | 4822 124 40433 | 47µF 20% 25V |
| 2290 | 5322 126 11583 | 10nF 10% 50V 0603 |
| 2291 | 4822 126 13883 | 220pF 5% 50V |
| 2292 | 2020 021 91354 | 1000µF 20% 50V |
| 2293 | 4822 126 13883 | 220pF 5% 50V |
| 2294 | 2020 021 91354 | 1000µF 20% 50V |
| 2303 | 4822 121 42408 | 220nF 10% 50V |
| 2304 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2305 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2306 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2316 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2322 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2324 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2343 | 4822 124 22652 | 2.2µF 20% 50V |
| 2350 | 4822 124 40207 | 100µF 20% 25V |
| 2352 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2364 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2366 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2370 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2376 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2380 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2381 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2385 | 3198 017 41050 | 1µF 10V 0603 |
| 2393 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2396 | 4822 121 42408 | 220nF 10% 50V |
| 2400 | 4822 126 13589 | 470nF 275V |
| 2401 | 4822 126 13589 | 470nF 275V |
| 2404 | 4822 126 14525 | 47pF 5% 1kV |
| 2405 | 2020 554 90148 | 470pF 20% 250V |
| 2406 | 4822 126 14525 | 47pF 5% 1kV |
| 2407 | 2020 554 90148 | 470pF 20% 250V |
| 2408 | 2020 554 90148 | 470pF 20% 250V |
| 2409 | 2020 554 90148 | 470pF 20% 250V |
| 2410 | 4822 126 13589 | 470nF 275V |
| 2411 | 2020 554 90148 | 470pF 20% 250V |
| 2412 | 2020 554 90148 | 470pF 20% 250V |
| 2465 | 4822 124 40207 | 100µF 20% 25V |
| 2503 | 2222 151 90062 | 47µF 20% 450V |
| 2504 | 5322 126 11578 | 1nF 10% 50V 0603 |
| 2505 | 2020 021 91354 | 1000µF 20% 50V |
| 2507 | 2020 552 94427 | 100pF 5% 50v 0603 |
| 2508 | 4822 124 12032 | 4.7µF 20% 50V |
| 2509 | 2020 552 94427 | 100pF 5% 50v 0603 |
| 2510 | 4822 124 81145 | 1000µF 16V 20% |
| 2511 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2512 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2513 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2530 | 5322 124 40641 | 10µF 20% 100V |
| 2532 | 4822 124 40207 | 100µF 20% 25V |
| 2533 | 4822 124 40207 | 100µF 20% 25V |
| 2540 | 4822 124 40207 | 100µF 20% 25V |
| 2541 | 4822 124 40207 | 100µF 20% 25V |
| 2600 | 4822 122 33799 | 1nF 10% 1kV |
| 2601 | 4822 122 33799 | 1nF 10% 1kV |
| 2605 | 2222 479 90086 | 1µF 400V 5% |
| 2608 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2610 | 4822 121 70584 | 1,8nF 5% 2KV |
| 2611 | 2222 375 90276 | 220pF 5% 2kV |
| 2612 | 5322 126 11578 | 1nF 10% 50V 0603 |
| 2613 | 5322 126 11578 | 1nF 10% 50V 0603 |
| 2616 | 2222 057 36221 | 220µF 20% 400V 057 |
| 2617 | 2222 057 36221 | 220µF 20% 400V 057 |
| 2640 | 4822 126 13881 | 470pF 5% 50V |
| 2642 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2651 | 5322 126 11583 | 10nF 10% 50V 0603 |
| 2653 | 4822 126 14241 | 330pF 50V 0603 |
| 2654 | 4822 124 40433 | 47µF 20% 25V |
| 2655 | 4822 121 51319 | 1µF 10% 63V |
| 2656 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2662 | 4822 124 80061 | 1000µF 20% 25V |
| 2663 | 4822 124 40255 | 100µF 20% 63V |
| 2664 | 4822 124 40255 | 100µF 20% 63V |
| 2665 | 4822 126 13881 | 470pF 5% 50V |
| 2666 | 4822 126 13193 | 4.7nF 10% 63V |
| 2670 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2671 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2672 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2673 | 4822 121 43343 | 4.7nF 10% 400V |
| 2674 | 4822 121 41664 | 22nF 10% 400V |
| 2700 | 4822 124 80791 | 470µF 20% 16V |
| 2703 | 4822 124 80791 | 470µF 20% 16V |
| 2709 | 4822 124 80791 | 470µF 20% 16V |

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| | | |
|---|---|---|
| 3003 | 4822 051 30124 | 120kΩ 5% 0.062W |
| 3003 | 4822 117 12864 | 82kΩ 5% 0.6W |
| 3004 | 4822 051 30153 | 15kΩ 5% 0.062W |
| 3005 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3006 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3007 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3008 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3009 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3010 | 4822 051 30153 | 15kΩ 5% 0.062W |
| 3011 | 4822 051 30561 | 560Ω 5% 0.062W |
| 3012 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3013 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3014 | 4822 116 52191 | 33Ω 5% 0.5W |
| 3015 | 4822 116 52176 | 10Ω 5% 0.5W |
| 3016 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3017 | 4822 116 52191 | 33Ω 5% 0.5W |
| 3018 | 4822 116 52176 | 10Ω 5% 0.5W |
| 3019 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3020 | 4822 051 30563 | 56kΩ 5% 0.062W |
| 3021 | 4822 053 11478 | 4Ω 5% 2W |
| 3022 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3023 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3024 | 4822 050 27503 | 75kΩ 1% 0,6W |
| 3025 | 4822 117 12903 | 1.8kΩ 1% 0.063W 0603 |
| 3026 | 4822 101 11186 | 470Ω 30% 0.1W |
| 3027 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3028 | 4822 117 10362 | 7.5kΩ 1% 0,1W |
| 3029 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3030 | 4822 051 30183 | 18kΩ 5% 0.062W |
| 3031 | 2322 704 61103 | 11kΩ 1% 0603 |
| 3032 | 2322 704 61103 | 11kΩ 1% 0603 |
| 3033 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3037 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3038 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3039 | 4822 051 30105 | 1MΩ 5% 0.062W |
| 3040 | 4822 117 10837 | 100kΩ 1% 0.1W |
| 3041 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3042 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3043 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3044 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3045 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3046 | 4822 053 20565 | 5.6MΩ 5% 0.25W |
| 3047 | 4822 051 30154 | 150kΩ 5% 0.062W |
| 3048 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3049 | 4822 051 30123 | 12kΩ 5% 0.062W |
| 3050 | 4822 052 10398 | 3.9Ω 5% 0,33W |
| 3051 | 4822 051 20399 | 39Ω 5% 0.1W |
| 3053 | 2322 662 93131 | 10Ω PTC |
| 3054 | 4822 050 21003 | 10kΩ 1% 0.6W |
| 3056 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3057 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3058 | 4822 051 20105 | 1MΩ 5% 0.1W |
| 3062 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3064 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3065 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3066 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3067 | 4822 051 30153 | 15kΩ 5% 0.062W |
| 3070 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3071 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3075 | 4822 116 83866 | 1MΩ 5% 0.5W |
| 3076 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3077 | 4822 116 83866 | 1MΩ 5% 0.5W |
| 3078 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3080 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3081 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3083 | 4822 051 10102 | 1kΩ 2% 0.25W |
| 3084 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3085 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3086 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3087 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3088 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3090 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3091 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3092 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3093 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3095 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3096 | 4822 051 30562 | 5.6kΩ 5% 0.063W 0603 |
| 3097 | 4822 117 12968 | 820Ω 5% 0.62W |
| 3110 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3111 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3112 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3113 | 4822 051 30474 | 470kΩ 5% 0.062W |
| 3114 | 4822 051 20564 | 560kΩ 5% 0.1W |
| 3115 | 4822 117 12891 | 220kΩ 1% 0.063W 0603 |
| 3116 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3117 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3118 | 4822 116 83303 | 0.1Ω 2W |
| 3119 | 4822 116 83303 | 0.1Ω 2W |
| 3120 | 4822 117 12903 | 1.8kΩ 1% 0.063W 0603 |
| 3121 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3122 | 2322 734 67503 | 75kΩ 1% 0.062W 0805 |
| 3123 | 4822 117 10965 | 18kΩ 1% 0.1W |
| 3124 | 2120 108 94004 | 7.5kΩ 1% 0603 |
| 3125 | 2120 108 94004 | 7.5kΩ 1% 0603 |
| 3126 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3127 | 4822 101 11187 | 1kΩ 30% 0,1W |
| 3128 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3129 | 4822 053 10103 | 10kΩ 5% 1W |
| 3130 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3131 | 2322 704 61103 | 11kΩ 1% 0603 |
| 3133 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3134 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3135 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3136 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3138 | 4822 117 11503 | 220Ω 1% 0.1W |
| 3139 | 4822 117 11503 | 220Ω 1% 0.1W |
| 3140 | 2322 734 67503 | 75kΩ 1% 0.062W 0805 |
| 3141 | 2322 734 67503 | 75kΩ 1% 0.062W 0805 |
| 3142 | 5322 117 12487 | 1kΩ 1% 0.125W |
| 3143 | 4822 053 11472 | 4kΩ 5% 2W |
| 3146 | 2306 327 90035 | Jump. 0.22Ω |
| 3147 | 2322 704 61103 | 11kΩ 1% 0603 |
| 3148 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3149 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3150 | 4822 117 10837 | 100kΩ 1% 0.1W |
| 3151 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3152 | 4822 117 11373 | 100Ω 1% 0805 |
| 3200 | 2322 730 61224 | 220kΩ 5% 0.062W 0805 |
| 3201 | 4822 053 10103 | 10kΩ 5% 1W |
| 3202 | 4822 051 30479 | 47Ω 5% 0.062W |
| 3203 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3204 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3205 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3212 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3213 | 4822 051 30105 | 1MΩ 5% 0.062W |
| 3214 | 4822 117 12889 | 270kΩ 1% 0.063W 0603 |
| 3216 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3217 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3218 | 4822 116 83303 | 0.1Ω 2W |
| 3219 | 4822 116 83303 | 0.1Ω 2W |
| 3224 | 5322 117 13028 | 12kΩ 1% 0.063W 0603 |
| 3225 | 2322 704 61103 | 11kΩ 1% 0603 |
| 3226 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3228 | 4822 051 30151 | 150Ω 5% 0.062W |
| 3240 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3241 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3260 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3261 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3262 | 4822 117 11188 | 20kΩ 1% 0,1W |
| 3264 | 4822 051 30682 | 6.8kΩ 5% 0.062W |
| 3265 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3268 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3292 | 4822 051 30561 | 560Ω 5% 0.062W |
| 3300 | 4822 117 13579 | 220kΩ 1% 0.1W 0805 |
| 3301 | 4822 117 13579 | 220kΩ 1% 0.1W 0805 |
| 3302 | 2312 916 71004 | 100kΩ 1% |
| 3303 | 2312 916 71004 | 100kΩ 1% |
| 3304 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3305 | 2312 916 76202 | 6.2kΩ 1% |
| 3306 | 2322 704 61103 | 11kΩ 1% 0603 |
| 3307 | 2322 704 61103 | 11kΩ 1% 0603 |
| 3307 | 5322 117 13028 | 12kΩ 1% 0.063W 0603 |
| 3308 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3309 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3310 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3311 | 4822 117 13579 | 220kΩ 1% 0.1W 0805 |
| 3312 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3313 | 2120 108 94004 | 7.5kΩ 1% 0603 |
| 3316 | 2312 916 77502 | 7.5kΩ 1% |
| 3317 | 2120 108 94004 | 7.5kΩ 1% 0603 |
| 3318 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3319 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3320 | 2322 704 61103 | 11kΩ 1% 0603 |
| 3320 | 4822 117 10833 | 10kΩ 1% 0.1W |
| 3321 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3322 | 4822 117 10833 | 10kΩ 1% 0.1W |
| 3322 | 5322 117 13042 | 3.9kΩ 1% 0.063W 0603 |
| 3323 | 4822 117 10833 | 10kΩ 1% 0.1W |
| 3323 | 5322 117 13028 | 12kΩ 1% 0.063W 0603 |
| 3324 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3325 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3326 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3327 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3328 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3330 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3331 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3332 | 4822 117 11144 | 3.9kΩ 1% 0.1W |
| 3333 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3334 | 4822 117 12955 | 2.7kΩ 1% 0.1W 0805 |
| 3335 | 4822 116 83933 | 15kΩ 1% 0.1W |
| 3338 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3339 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3340 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3341 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3342 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3343 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3344 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3345 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3346 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3347 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3348 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3349 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3350 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3351 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3352 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3353 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3354 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3358 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3359 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3360 | 4822 117 11817 | 1.2kΩ 1% 1/16W |
| 3361 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3362 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3363 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3364 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3365 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3366 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3367 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3368 | 2120 660 90042 | PTC 330Ω 16V |
| 3369 | 4822 051 30272 | 2.7kΩ 5% 0.062W |
| 3370 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3371 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3372 | 9337 224 50116 | Temp sens. KTY81-210 |
| 3372 | 9337 224 60116 | Temp sens. KTY81-220 |
| 3373 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3374 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3376 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3377 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3378 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3380 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3381 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3382 | 5322 117 13039 | 222kΩ 1% 0.063W 0603 |
| 3385 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3386 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3387 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3388 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3389 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3390 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3391 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3392 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3393 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3394 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3395 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3396 | 2312 916 71004 | 100kΩ 1% |
| 3397 | 2312 916 71004 | 100kΩ 1% |
| 3400 | 2322 595 90021 | VDR 1mA/495V 850V |
| 3401 | 4822 117 10118 | 1MΩ 5% 0,5W |
| 3402 | 4822 053 21475 | 4.7MΩ 5% 0,5W |
| 3403 | 4822 053 21475 | 4.7MΩ 5% 0,5W |
| 3404 | 4822 116 83872 | 220Ω 5% 0.5W |
| 3450 | 2322 662 93131 | 10Ω PTC |
| 3451 | 2322 662 93131 | 10Ω PTC |
| 3452 | 2122 612 00051 | NTC 1Ω 20% |
| 3453 | 2122 612 00051 | NTC 1Ω 20% |
| 3460 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3461 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3463 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3465 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3467 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3469 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3470 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3501 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3502 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3503 | 5322 117 13026 | 4.7kΩ 1% 0.063W 0603 |
| 3503 | 5322 117 13042 | 3.9kΩ 1% 0.063W 0603 |
| 3504 | 5322 117 13024 | 33kΩ 1% 0.063W 0603 |
| 3505 | 4822 117 11139 | 1.5kΩ 1% 0.1W |
| 3506 | 2322 662 93131 | 10Ω PTC |
| 3507 | 4822 053 20225 | 2.2MΩ 5% 0.25W |
| 3508 | 2322 194 63109 | 10Ω 5% 2W |
| 3520 | 4822 051 30109 | 10Ω 5% 0.062W |
| 3530 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3608 | 4822 116 52179 | 12Ω 5% 0,5W |
| 3610 | 5322 116 53564 | 3.3Ω 5% 0.5W |
| 3611 | 4822 050 11002 | 1kΩ 1% 0.4W |
| 3614 | 2120 106 90565 | 0.1Ω 5% 1W |
| 3615 | 2120 106 90565 | 0.1Ω 5% 1W |
| 3639 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3640 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3641 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3642 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3650 | 2322 156 21305 | 1.3MΩ 1% 0,25W |
| 3651 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3652 | 4822 051 30105 | 1MΩ 5% 0.062W |
| 3653 | 4822 116 52231 | 820Ω 5% 0.5W |
| 3654 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3655 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3663 | 4822 052 10108 | 1Ω 5% 0.33W |
| 3664 | 2322 734 62704 | 270kΩ 1% 0.1W 0805 |

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|---|---|---|
| 3665 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3666 | 4822 116 52175 | 100Ω 5% 0.5W |
| 3667 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3668 | 4822 052 11102 | 1kΩ 5% 0,5W |
| 3670 | 4822 050 27504 | 750kΩ 1% 0,6W |
| 3671 | 4822 117 10833 | 10kΩ 1% 0.1W |
| 3673 | 4822 052 11102 | 1kΩ 5% 0,5W |
| 3674 | 4822 053 20105 | 1MΩ 5% 0,25W |
| 3675 | 4822 053 10221 | 220Ω 5% 1W |
| 3676 | 4822 053 10471 | 470Ω 5% 1W |
| 3676 | 4822 053 11471 | 470Ω 5% 2W |
| 3700 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3701 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3702 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3703 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3706 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3707 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3708 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3709 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3999 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 4261 | 4822 051 30008 | Jumper 0603 |
| 4268 | 4822 051 30008 | Jumper 0603 |
| 4300 | 4822 051 30008 | Jumper 0603 |

| | | |
|---|---|---|
| 5001 | 3128 138 38561 | Transformer CE136H |
| 5001 | 8222 289 53691 | Driver transf. CE136H |
| 5002⚠ | 3128 138 40821 | Transformer CE423D |
| 5003 | 4822 157 71442 | 150µH 10% |
| 5004⚠ | 3128 138 40821 | Transformer CE423D |
| 5120 | 3128 138 40381 | Inductor Coil CU20V |
| 5200 | 3198 018 71010 | 100µF 10% |
| 5220 | 3128 138 70541 | Transformer CT296F |
| 5224 | 2422 535 95273 | 6.8µH 20% |
| 5225 | 2422 535 95273 | 6.8µH 20% |
| 5260 | 3198 018 71010 | 100µF 10% |
| 5268 | 2422 536 00288 | 100µH 10% |
| 5290 | 3128 138 40391 | Transformer CU15 |
| 5291 | 4822 157 71467 | 39µH 10% |
| 5292 | 4822 157 71467 | 39µH 10% |
| 5293 | 4822 157 71467 | 39µH 10% |
| 5401⚠ | 3122 138 38901 | Mains filter CU28D3 |
| 5402⚠ | 3122 138 38901 | Mains filter CU28D3 |
| 5403 | 8228 001 32681 | Filter U20 DIFF. mode |
| 5404⚠ | 3122 138 38901 | Mains filter CU28D3 |
| 5500⚠ | 3128 138 40361 | Transformer CE165T |
| 5505 | 4822 157 71467 | 39µH 10% |
| 5600 | 3128 138 41031 | Transformer CE423D |
| 5612 | 4822 157 11411 | Bead 83Ω at 100MHz |
| 5703 | 4822 157 71414 | 1000µH 10% |
| 5704 | 4822 157 11499 | BLM11P600SPT |
| 5709 | 4822 157 71414 | 1000µH 10% |
| 5710 | 4822 157 11499 | BLM11P600SPT |

| | | |
|---|---|---|
| 6004 | 4822 130 11397 | BAS316 |
| 6005 | 4822 130 11397 | BAS316 |
| 6007 | 4822 130 30621 | 1N4148 |
| 6008 | 4822 130 30621 | 1N4148 |
| 6009 | 4822 130 11397 | BAS316 |
| 6010 | 4822 130 11397 | BAS316 |
| 6011 | 4822 130 11397 | BAS316 |
| 6012 | 4822 130 34281 | BZX79-B15 |
| 6013 | 4822 130 34281 | BZX79-B15 |
| 6018 | 4822 130 11397 | BAS316 |
| 6019 | 4822 130 11397 | BAS316 |
| 6021 | 9340 550 66112 | BYV28-200/24 |
| 6022 | 4822 130 11397 | BAS316 |
| 6023 | 4822 130 11397 | BAS316 |
| 6027 | 4822 130 30621 | 1N4148 |
| 6028 | 4822 130 30621 | 1N4148 |
| 6031 | 9322 129 37685 | BZM55-C5V6 |
| 6032 | 9322 129 37685 | BZM55-C5V6 |
| 6033 | 4822 130 11594 | BZX284-C47 |
| 6034 | 4822 130 11397 | BAS316 |
| 6035 | 4822 130 11397 | BAS316 |
| 6041 | 9322 167 08687 | STTH2003CF |
| 6042 | 9322 150 18685 | BZX384-C47 |
| 6043 | 5322 130 31938 | BYV27-200 |
| 6044 | 9322 167 08687 | STTH2003CF |
| 6045 | 9340 550 66112 | BYV28-200/24 |
| 6046 | 9322 167 08687 | STTH2003CF |
| 6047 | 9322 167 08687 | STTH2003CF |
| 6050 | 4822 130 31024 | BZX79-B18 |
| 6054 | 4822 130 41601 | BYV95A |
| 6054 | 4822 130 42488 | BYD33D |
| 6055 | 4822 130 41601 | BYV95A |
| 6055 | 4822 130 42488 | BYD33D |
| 6061 | 4822 130 31024 | BZX79-B18 |
| 6075 | 9336 018 60133 | BZT03-C300 |
| 6077 | 9336 018 60133 | BZT03-C300 |
| 6086 | 4822 130 11397 | BAS316 |
| 6086 | 4822 130 83757 | BAS216 |
| 6095 | 4822 130 11397 | BAS316 |
| 6111 | 4822 130 11397 | BAS316 |
| 6112 | 4822 130 11397 | BAS316 |
| 6113 | 4822 130 11397 | BAS316 |
| 6117 | 4822 130 11152 | UDZ18B |
| 6120 | 4822 130 11596 | BYW29EX-200 |
| 6123 | 4822 130 11397 | BAS316 |
| 6133 | 4822 130 11397 | BAS316 |
| 6142 | 9340 550 66112 | BYV28-200/24 |
| 6202 | 4822 130 11397 | BAS316 |
| 6205 | 4822 130 11152 | UDZ18B |
| 6206 | 4822 130 11397 | BAS316 |
| 6211 | 9322 128 65685 | RS1G |
| 6213 | 4822 130 11397 | BAS316 |
| 6216 | 4822 130 11152 | UDZ18B |
| 6224 | 9322 173 47687 | STPS20L40CFP |
| 6225 | 9322 173 47687 | STPS20L40CFP |
| 6230 | 5322 130 31938 | BYV27-200 |
| 6230 | 9340 550 66112 | BYV28-200/24 |
| 6232 | 4822 130 11522 | UDZ15B |
| 6260 | 4822 130 11421 | BT151X-500R |
| 6267 | 9322 161 77682 | SB540L-7024 |
| 6291 | 9322 131 78682 | D4SBL20 |
| 6312 | 4822 130 11528 | 1PS76SB10 |
| 6313 | 4822 130 11528 | 1PS76SB10 |
| 6314 | 4822 130 11397 | BAS316 |
| 6321 | 4822 130 11528 | 1PS76SB10 |
| 6322 | 4822 130 11528 | 1PS76SB10 |
| 6324 | 4822 130 11397 | BAS316 |
| 6325 | 4822 130 11416 | PDZ6.8B |
| 6333 | 4822 130 11528 | 1PS76SB10 |
| 6334 | 4822 130 11528 | 1PS76SB10 |
| 6335 | 4822 130 11397 | BAS316 |
| 6340 | 4822 130 11528 | 1PS76SB10 |
| 6341 | 4822 130 11528 | 1PS76SB10 |
| 6342 | 4822 130 11397 | BAS316 |
| 6344 | 4822 130 10838 | UDZ3.3B |
| 6347 | 4822 130 10654 | BAT254 |
| 6348 | 4822 130 20297 | BT169B |
| 6362 | 4822 130 11397 | BAS316 |
| 6364 | 4822 130 11397 | BAS316 |
| 6365 | 4822 130 11397 | BAS316 |
| 6375 | 4822 130 11397 | BAS316 |
| 6376 | 4822 130 11397 | BAS316 |
| 6378 | 4822 130 11528 | 1PS76SB10 |
| 6390 | 4822 130 11397 | BAS316 |
| 6460 | 4822 130 11397 | BAS316 |
| 6461 | 4822 130 11397 | BAS316 |
| 6470 | 4822 130 11397 | BAS316 |
| 6471 | 4822 130 11397 | BAS316 |
| 6501 | 9336 018 60133 | BZT03-C300 |
| 6502 | 9336 018 60133 | BZT03-C300 |
| 6503 | 9322 128 65685 | RS1G |
| 6504 | 9322 128 65685 | RS1G |
| 6505 | 9322 161 76682 | SB340L-7024 |
| 6510 | 9322 099 61685 | BYG10J |
| 6511 | 9322 099 61685 | BYG10J |
| 6512 | 9322 099 61685 | BYG10J |
| 6513 | 9322 099 61685 | BYG10J |
| 6520 | 4822 130 11397 | BAS316 |
| 6530 | 4822 130 11152 | UDZ18B |
| 6531 | 4822 130 11152 | UDZ18B |
| 6600 | 9322 131 67679 | GBU8JL-7000 |
| 6605 | 9322 161 81682 | 1N5406L-7024 |
| 6606 | 9322 161 81682 | 1N5406L-7024 |
| 6608 | 4822 130 11397 | BAS316 |
| 6609 | 4822 130 32152 | BZT03-C18 |
| 6611 | 3139 120 52021 | BYV29X-500 |
| 6640 | 9339 680 20115 | PRLL5819 |
| 6641 | 4822 130 11397 | BAS316 |
| 6642 | 9339 680 20115 | PRLL5819 |
| 6643 | 4822 130 11152 | UDZ18B |
| 6651 | 9339 680 20115 | PRLL5819 |
| 6653 | 9322 129 39685 | BZM55-C8V2 |
| 6654 | 4822 130 11397 | BAS316 |
| 6660 | 9322 128 65685 | RS1G |
| 6661 | 9322 128 65685 | RS1G |
| 6663 | 4822 130 11397 | BAS316 |
| 6665 | 9339 680 20115 | PRLL5819 |
| 6700 | 4822 130 11152 | UDZ18B |
| 6703 | 9339 680 20115 | PRLL5819 |
| 6706 | 4822 130 11152 | UDZ18B |
| 6709 | 9339 680 20115 | PRLL5819 |

| | | |
|---|---|---|
| 7001 | 9322 108 21682 | MC34067P |
| 7002⚠ | 9322 149 04682 | TCET1102 |
| 7003⚠ | 9322 149 04682 | TCET1102 |
| 7005 | 9322 164 01687 | STU16NB50I |
| 7005 | 9322 192 18687 | STP15NK50ZFP |
| 7006 | 9322 164 01687 | STU16NB50I |
| 7006 | 9322 192 18687 | STP15NK50ZFP |
| 7007 | 4822 130 40854 | BC327 |
| 7008 | 4822 130 40854 | BC327 |
| 7009 | 3198 010 42310 | BC847BW |
| 7010 | 4822 209 81397 | TL431CLPST |
| 7011 | 4822 209 81397 | TL431CLPST |
| 7017 | 3198 010 42320 | BC857BW |
| 7018 | 3198 010 42310 | BC847BW |
| 7020 | 9335 671 30126 | BC517 |
| 7021 | 9335 671 30126 | BC517 |
| 7022 | 3198 010 42310 | BC847BW |
| 7042 | 4822 130 41646 | BF423 |
| 7050 | 9340 557 17118 | PSMN035-150B |
| 7052 | 9322 165 02668 | IRFR18N15D |
| 7058 | 3198 010 42310 | BC847BW |
| 7059 | 4822 130 41782 | BF422 |
| 7090 | 3198 010 42320 | BC857BW |
| 7091 | 3198 010 42320 | BC857BW |
| 7092 | 4822 130 41246 | BC327-25 |
| 7093 | 4822 209 80591 | LM317T |
| 7110 | 4822 130 41646 | BF423 |
| 7111 | 4822 130 41646 | BF423 |
| 7112 | 9352 673 56112 | TEA1507P/N1 |
| 7117 | 9340 557 17118 | PSMN035-150B |
| 7120 | 9322 149 04682 | TCET1102 |
| 7121 | 4822 209 81397 | TL431CLPST |
| 7130 | 4822 209 81397 | TL431CLPST |
| 7134 | 3198 010 42310 | BC847BW |
| 7140 | 9340 425 10115 | BC857BS |
| 7142 | 4822 130 41646 | BF423 |
| 7143 | 3198 010 42310 | BC847BW |
| 7144 | 4822 130 41782 | BF422 |
| 7145 | 3198 010 42320 | BC857BW |
| 7200 | 4822 130 63316 | BSN304 |
| 7202 | 9965 000 04199 | BSN20 |
| 7212 | 9352 673 56112 | TEA1507P/N1 |
| 7217 | 9340 557 18127 | PSMN070-200P |
| 7220 | 9322 149 04682 | TCET1102 |
| 7227 | 4822 209 81397 | TL431CLPST |
| 7230 | 4822 209 12334 | L4940V85 |
| 7260 | 9322 166 31682 | IC L4973V3.3 |
| 7304 | 4822 209 81397 | TL431CLPST |
| 7308 | 4822 209 60177 | LM339D |
| 7326 | 3198 010 42310 | BC847BW |
| 7327 | 3198 010 42310 | BC847BW |
| 7330 | 4822 209 60177 | LM339D |
| 7341 | 3198 010 42320 | BC857BW |
| 7348 | 3198 010 42310 | BC847BW |
| 7351 | 3198 010 42310 | BC847BW |
| 7352 | 3198 010 42310 | BC847BW |
| 7362 | 3198 010 42310 | BC847BW |
| 7366 | 4822 209 63709 | LM324D |
| 7370 | 5322 209 33172 | PCF8574AT |
| 7375 | 3198 010 42310 | BC847BW |
| 7376 | 3198 010 42310 | BC847BW |
| 7389 | 3198 010 42320 | BC857BW |
| 7391 | 3198 010 42320 | BC857BW |
| 7393 | 3198 010 42310 | BC847BW |
| 7460 | 4822 130 42804 | BC817-25 |
| 7460 | 9340 219 30115 | BC817-25W |
| 7465 | 3198 010 42320 | BC857BW |
| 7470 | 4822 130 42804 | BC817-25 |
| 7470 | 9340 219 30115 | BC817-25W |
| 7500 | 9322 037 99682 | TNY256P |
| 7501⚠ | 9322 149 04682 | TCET1102 |
| 7502 | 4822 209 14933 | TL431IZ |
| 7530 | 9322 157 95668 | STD16NE06L |
| 7531 | 9322 157 95668 | STD16NE06L |
| 7540 | 4822 209 80817 | L7805CV |
| 7608 | 5322 130 44593 | BC369 |
| 7610 | 9322 130 47687 | STY34NB50 |
| 7640 | 4822 130 63316 | BSN304 |
| 7641 | 4822 130 40981 | BC337-25 |
| 7650 | 9322 130 69682 | IC MC33368P |
| 7654 | 3198 010 42320 | BC857BW |
| 7660 | 5322 209 71759 | MCT7815CT |
| 7700 | 9322 115 29668 | SI9433DY |
| 7701 | 3198 010 42310 | BC847BW |
| 7706 | 9322 115 29668 | SI9433DY |
| 7707 | 3198 010 42310 | BC847BW |

## SCAVIO Panel [SC]

### Various

| | | |
|---|---|---|
| 0020 | 3122 128 13681 | Conn. plate base |
| 0252 | 3122 121 67261 | Earth sheet |
| 0301 | 2422 025 17396 | Connector 20P m |
| 0305 | 2422 025 16705 | Connector 12P m |
| 0318 | 2422 025 17233 | Connector 32P f |

| | | |
|---|---|---|
| 0319 | 2422 025 17047 | Connector 13P m |
| 0320 | 2422 015 19565 | D-lock 12.7mm |
| 0320 | 2422 025 16545 | Connector 10P m |
| 0376 | 2422 025 16768 | Connector 9P f |
| 0378 | 2422 026 05071 | Socket 4P f Wh/Rd |
| 0382 | 2422 025 17274 | Connector 10P m |
| 0385 | 2422 025 17274 | Connector 10P m |
| 0388 | 2422 025 16704 | Connector 8P m |
| 0600 | 3122 357 00421 | Software (check Prod.Surv.) |
| 0601 | 3122 357 00382 | Software (check Prod. surv.) |
| 0603 | 3122 357 00285 | Software (check Prod.Surv.) |
| 1032 | 3122 357 21643 | VGA Connector panel |
| 1061⚠ | 3122 358 76342 | Mains inlet unit |
| 1063 | 3122 357 22061 | PCA SCAVIO basic |
| 1100⚠ | 2422 086 11009 | Fuse T1.A 63V 2410 |
| 1105⚠ | 2422 086 11092 | Fuse F0.5A 50V 1206 |
| 1170⚠ | 2422 086 11092 | Fuse F0.5A 50V 1206 |
| 1171⚠ | 2422 086 11013 | Fuse F0.315A 32V 1206 |
| 1415 | 2422 543 89022 | Xtal 6MHz 20pF CX5F |
| 1570 | 2422 543 01115 | Crystal 24.576MHz |
| 1575⚠ | 2422 086 11092 | Fuse F0.5A 50V 1206 |
| 1670⚠ | 2422 086 10964 | Fuse T0.630A 63V |
| 8305 | 3104 311 05181 | Cable 12P/315/12P |
| 8318 | 3122 358 76621 | Foil S18-V18 |
| 8319 | 3104 311 04231 | Cable 13P/120/13P |
| 8391 | 3122 358 76331 | Tree assy M91-CP91 |

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| | | |
|---|---|---|
| 2142 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2143 | 4822 124 12095 | 100µF 20% 16V |
| 2144 | 5322 124 41945 | 22µF 20% 35V |
| 2146 | 3198 017 34730 | 47nF 16V 0603 |
| 2150 | 5322 124 41945 | 22µF 20% 35V |
| 2151 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2152 | 3198 017 34730 | 47nF 16V 0603 |
| 2156 | 5322 124 41945 | 22µF 20% 35V |
| 2158 | 3198 017 34730 | 47nF 16V 0603 |
| 2162 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2164 | 4822 124 12095 | 100µF 20% 16V |
| 2165 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2166 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2167 | 4822 124 12095 | 100µF 20% 16V |
| 2170 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2171 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2172 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2173 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2174 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2175 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2176 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2177 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2178 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2179 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2180 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2181 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2182 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2183 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2184 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2185 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2186 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2187 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2188 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2189 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2190 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2191 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2192 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2193 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2195 | 4822 124 23002 | 10µF 20% 16V |
| 2196 | 4822 124 23002 | 10µF 20% 16V |
| 2197 | 4822 124 23002 | 10µF 20% 16V |
| 2198 | 4822 124 23002 | 10µF 20% 16V |
| 2199 | 4822 124 23002 | 10µF 20% 16V |
| 2205 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2206 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2207 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2208 | 4822 126 14127 | 39nF 10% 50V 0805 |
| 2210 | 5322 126 11581 | 3.9nF 10% 63V 0603 |
| 2212 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2300 | 4822 124 12095 | 100µF 20% 16V |
| 2301 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2302 | 4822 124 23002 | 10µF 20% 16V |
| 2304 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2308 | 5322 124 41945 | 22µF 20% 35V |
| 2310 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2311 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2318 | 5322 124 41945 | 22µF 20% 35V |
| 2328 | 5322 124 41945 | 22µF 20% 35V |
| 2337 | 2020 552 94427 | 100pF 5% 50v 0603 |
| 2340 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2351 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2352 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2353 | 4822 124 23002 | 10µF 20% 16V |
| 2354 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2355 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2356 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2370 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2372 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2375 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2381 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2382 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2383 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2415 | 2238 867 75339 | 33pF 5% 50V 0603 |
| 2416 | 4822 126 11669 | 27pF 5% 50V 0603 |
| 2418 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2419 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2420 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2432 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2433 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2434 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2435 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2436 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2437 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2438 | 4822 126 13879 | 220nF 20% 16V |
| 2439 | 4822 126 13879 | 220nF 20% 16V |
| 2446 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2447 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2448 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2499 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2500 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2501 | 4822 126 14226 | 82pF 5% 50V 0603 |
| 2502 | 4822 126 14226 | 82pF 5% 50V 0603 |
| 2503 | 4822 126 14226 | 82pF 5% 50V 0603 |
| 2504 | 4822 126 14226 | 82pF 5% 50V 0603 |
| 2505 | 4822 126 14226 | 82pF 5% 50V 0603 |
| 2506 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2511 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2513 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2515 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2520 | 4822 124 23002 | 10µF 20% 16V |
| 2521 | 4822 124 23002 | 10µF 20% 16V |
| 2522 | 4822 124 23002 | 10µF 20% 16V |
| 2523 | 4822 124 23002 | 10µF 20% 16V |
| 2524 | 4822 124 23002 | 10µF 20% 16V |
| 2530 | 5322 124 41945 | 22µF 20% 35V |
| 2531 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2533 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2534 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2535 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2537 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2538 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2541 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2546 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2547 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2548 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2550 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2551 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2552 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2553 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2554 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2555 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2557 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2558 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2559 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2560 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2562 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2563 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2564 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2565 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2566 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2570 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2572 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2573 | 4822 124 23002 | 10µF 20% 16V |
| 2574 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2581 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2583 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2584 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2600 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2601 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2602 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2603 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2604 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2605 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2606 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2607 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2608 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2609 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2610 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2611 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2612 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2613 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2614 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2615 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2616 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2617 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2618 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2619 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2620 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2621 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2622 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2623 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2624 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2625 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2628 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2629 | 4822 122 33741 | 10pF 10% 50V |
| 2630 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2640 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2641 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2642 | 4822 124 23002 | 10µF 20% 16V |
| 2643 | 4822 124 23002 | 10µF 20% 16V |
| 2644 | 4822 124 23002 | 10µF 20% 16V |
| 2645 | 4822 124 23002 | 10µF 20% 16V |
| 2646 | 4822 124 23002 | 10µF 20% 16V |
| 2647 | 4822 124 23002 | 10µF 20% 16V |
| 2648 | 4822 124 23002 | 10µF 20% 16V |
| 2649 | 4822 124 23002 | 10µF 20% 16V |
| 2655 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2656 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2657 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2658 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2659 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2660 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2661 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2662 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2663 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2670 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2671 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2672 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2673 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2674 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2694 | 3198 016 31080 | 1pF 25% 50V 0603 |
| 2695 | 3198 016 31080 | 1pF 25% 50V 0603 |
| 2696 | 3198 016 31080 | 1pF 25% 50V 0603 |
| 2697 | 3198 016 31080 | 1pF 25% 50V 0603 |
| 2698 | 3198 016 31080 | 1pF 25% 50V 0603 |
| 2699 | 3198 016 31080 | 1pF 25% 50V 0603 |
| 2711 | 2020 552 94427 | 100pF 5% 50v 0603 |
| 2712 | 4822 126 14472 | 1µF 10% 10V 0805 |
| 2715 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2716 | 4822 126 11785 | 47pF 5% 50V 0603 |
| 2717 | 4822 126 14472 | 1µF 10% 10V 0805 |
| 2721 | 2020 552 94427 | 100pF 5% 50v 0603 |
| 2722 | 4822 126 14472 | 1µF 10% 10V 0805 |
| 2726 | 4822 126 11785 | 47pF 5% 50V 0603 |
| 2727 | 4822 126 14472 | 1µF 10% 10V 0805 |
| 2731 | 2020 552 94427 | 100pF 5% 50v 0603 |
| 2741 | 2020 552 94427 | 100pF 5% 50v 0603 |
| 2799 | 5322 124 41945 | 22µF 20% 35V |
| 2800 | 4822 124 12095 | 100µF 20% 16V |
| 2802 | 4822 124 23002 | 10µF 20% 16V |
| 2803 | 4822 124 23002 | 10µF 20% 16V |
| 2804 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2810 | 4822 124 12095 | 100µF 20% 16V |
| 2811 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2812 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2813 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2814 | 4822 126 14585 | 100nF 10% 50V |
| 2815 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2816 | 4822 124 23002 | 10µF 20% 16V |
| 2817 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2818 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2819 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2820 | 4822 124 23002 | 10µF 20% 16V |
| 2821 | 4822 124 23002 | 10µF 20% 16V |
| 2822 | 4822 126 14247 | 1.5nF 50V 0603 |
| 2823 | 4822 124 23002 | 10µF 20% 16V |
| 2824 | 4822 126 14247 | 1.5nF 50V 0603 |
| 2825 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2826 | 4822 126 14472 | 1µF 10% 10V 0805 |
| 2827 | 4822 126 14472 | 1µF 10% 10V 0805 |
| 2828 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2829 | 4822 124 23002 | 10µF 20% 16V |
| 2830 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2831 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2833 | 4822 126 14247 | 1.5nF 50V 0603 |
| 2834 | 4822 124 23002 | 10µF 20% 16V |
| 2837 | 4822 126 13881 | 470pF 5% 50V |
| 2838 | 4822 126 13881 | 470pF 5% 50V |
| 2839 | 4822 126 13881 | 470pF 5% 50V |
| 2840 | 4822 126 11669 | 27pF 5% 50V 0603 |
| 2842 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2843 | 4822 126 11669 | 27pF 5% 50V 0603 |
| 2844 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2845 | 4822 126 13883 | 220pF 5% 50V |
| 2848 | 4822 126 11669 | 27pF 5% 50V 0603 |
| 2849 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2850 | 4822 126 11669 | 27pF 5% 50V 0603 |
| 2852 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2853 | 4822 126 11669 | 27pF 5% 50V 0603 |

| | | |
|---|---|---|
| 2854 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2857 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2858 | 4822 126 11669 | 27pF 5% 50V 0603 |
| 2861 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2862 | 4822 126 11785 | 47pF 5% 50V 0603 |
| 2863 | 4822 126 14472 | 1µF 10% 10V 0805 |
| 2865 | 4822 126 11785 | 47pF 5% 50V 0603 |
| 2867 | 4822 126 13879 | 220nF 20% 16V |
| 2868 | 4822 126 14472 | 1µF 10% 10V 0805 |
| 2869 | 4822 126 14247 | 1.5nF 50V 0603 |
| 2870 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2874 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2879 | 4822 126 11669 | 27pF 5% 50V 0603 |
| 2880 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2881 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2882 | 2238 586 59812 | 100nF 20-80% 50V 0603 |

| | | |
|---|---|---|
| 3007 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3009 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3016 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3018 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3019 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3133 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3144 | 4822 051 30271 | 270Ω 5% 0.062W |
| 3145 | 4822 051 30223 | 22kΩ 5% 0.062W |
| 3146 | 4822 051 30561 | 560Ω 5% 0.062W |
| 3150 | 4822 051 30271 | 270Ω 5% 0.062W |
| 3151 | 4822 051 30223 | 22kΩ 5% 0.062W |
| 3152 | 4822 051 30561 | 560Ω 5% 0.062W |
| 3156 | 4822 051 30271 | 270Ω 5% 0.062W |
| 3157 | 4822 051 30223 | 22kΩ 5% 0.062W |
| 3158 | 4822 051 30561 | 560Ω 5% 0.062W |
| 3162 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3164 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3166 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3170 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3171 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3172 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3200 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3203 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3204 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3205 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3206 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3207 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3208 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3209 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3210 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3211 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3212 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3219 | 4822 117 12139 | 22Ω 5% 0.062W |
| 3294 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3295 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3296 | 4822 051 30474 | 470kΩ 5% 0.062W |
| 3300 | 4822 051 30153 | 15kΩ 5% 0.062W |
| 3304 | 4822 051 30689 | 68Ω 5% 0.063W 0603 |
| 3305 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3306 | 4822 051 30153 | 15kΩ 5% 0.062W |
| 3307 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3308 | 4822 051 30271 | 270Ω 5% 0.062W |
| 3309 | 4822 051 30273 | 27kΩ 5% 0.062W |
| 3310 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3311 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3312 | 4822 117 12903 | 1.8kΩ 1% 0.063W 0603 |
| 3313 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3314 | 4822 117 12903 | 1.8kΩ 1% 0.063W 0603 |
| 3316 | 4822 051 30153 | 15kΩ 5% 0.062W |
| 3317 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3318 | 4822 051 30271 | 270Ω 5% 0.062W |
| 3319 | 4822 051 30273 | 27kΩ 5% 0.062W |
| 3320 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3321 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3322 | 4822 117 12903 | 1.8kΩ 1% 0.063W 0603 |
| 3323 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3324 | 4822 117 12903 | 1.8kΩ 1% 0.063W 0603 |
| 3326 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3327 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3328 | 4822 051 30271 | 270Ω 5% 0.062W |
| 3329 | 4822 051 30273 | 27kΩ 5% 0.062W |
| 3330 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3331 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3332 | 4822 117 12903 | 1.8kΩ 1% 0.063W 0603 |
| 3333 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3334 | 4822 117 12903 | 1.8kΩ 1% 0.063W 0603 |
| 3336 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3337 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3338 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3339 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3340 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3344 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3346 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3348 | 4822 051 30474 | 470kΩ 5% 0.062W |
| 3349 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3350 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3351 | 4822 051 30689 | 68Ω 5% 0.063W 0603 |
| 3352 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3353 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3354 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3355 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3359 | 4822 051 30689 | 68Ω 5% 0.063W 0603 |
| 3363 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3370 | 4822 051 30474 | 470kΩ 5% 0.062W |
| 3371 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3372 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3373 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3375 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3376 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3377 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3379 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3380 | 3198 031 11010 | 4 x 100Ω 5% 1206 |
| 3381 | 3198 031 11010 | 4 x 100Ω 5% 1206 |
| 3382 | 3198 031 11010 | 4 x 100Ω 5% 1206 |
| 3383 | 3198 031 11010 | 4 x 100Ω 5% 1206 |
| 3384 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3385 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3386 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3387 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3388 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3389 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3390 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3391 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3392 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3393 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3394 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3398 | 3198 031 11010 | 4 x 100Ω 5% 1206 |
| 3400 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3402 | 3198 031 11010 | 4 x 100Ω 5% 1206 |
| 3404 | 3198 031 11010 | 4 x 100Ω 5% 1206 |
| 3405 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3406 | 3198 031 11010 | 4 x 100Ω 5% 1206 |
| 3410 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3411 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3413 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3414 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3415 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3418 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3419 | 4822 051 30392 | 3.9kΩ 5% 0.063W 0603 |
| 3420 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3421 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3422 | 4822 051 30152 | 1.5kΩ 5% 0.062W |
| 3424 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3426 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3428 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3429 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3430 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3431 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3432 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3433 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3435 | 4822 051 30273 | 27kΩ 5% 0.062W |
| 3436 | 4822 117 12891 | 220kΩ 1% 0.063W 0603 |
| 3448 | 3198 031 11010 | 4 x 100Ω 5% 1206 |
| 3449 | 3198 031 11010 | 4 x 100Ω 5% 1206 |
| 3450 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3451 | 3198 031 11010 | 4 x 100Ω 5% 1206 |
| 3452 | 3198 031 11010 | 4 x 100Ω 5% 1206 |
| 3453 | 3198 031 11010 | 4 x 100Ω 5% 1206 |
| 3460 | 3198 031 11010 | 4 x 100Ω 5% 1206 |
| 3461 | 3198 031 11010 | 4 x 100Ω 5% 1206 |
| 3462 | 3198 031 11010 | 4 x 100Ω 5% 1206 |
| 3463 | 3198 031 11010 | 4 x 100Ω 5% 1206 |
| 3464 | 3198 031 11010 | 4 x 100Ω 5% 1206 |
| 3483 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3485 | 4822 051 30151 | 150Ω 5% 0.062W |
| 3486 | 4822 051 30151 | 150Ω 5% 0.062W |
| 3487 | 4822 051 30151 | 150Ω 5% 0.062W |
| 3488 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3489 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3490 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3494 | 3198 031 14710 | 4 x 470Ω 5% 1206 |
| 3496 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3502 | 4822 051 30008 | Jumper 0603 |
| 3506 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3507 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3510 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3511 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3512 | 4822 051 30562 | 5.6kΩ 5% 0.063W 0603 |
| 3513 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3514 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3515 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3516 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3517 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3518 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3519 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3520 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3530 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3531 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3532 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3536 | 5322 117 13037 | 2.2kΩ 0.063W 0603 |
| 3540 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3541 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3545 | 4822 051 30008 | Jumper 0603 |
| 3547 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3548 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3550 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3551 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3552 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3553 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3556 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3557 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3558 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3559 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3560 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3562 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3566 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3567 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3568 | 4822 051 30008 | Jumper 0603 |
| 3570 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3571 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3572 | 4822 051 30008 | Jumper 0603 |
| 3575 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3578 | 4822 051 30151 | 150Ω 5% 0.062W |
| 3580 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3581 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3582 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3583 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3590 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3591 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3592 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3593 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3594 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3600 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3601 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3602 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3603 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3604 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3605 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3606 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3607 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3608 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3609 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3610 | 4822 051 30479 | 47Ω 5% 0.062W |
| 3611 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3615 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3620 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3621 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3622 | 4822 051 30479 | 47Ω 5% 0.062W |
| 3623 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3625 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3626 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3627 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3628 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3630 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3632 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3633 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3634 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3636 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3638 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3640 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3641 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3653 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3654 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3655 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3657 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3658 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3661 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3662 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3663 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3664 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3665 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3667 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3668 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3673 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3674 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3675 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3676 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3677 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3679 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3681 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3682 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3685 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3686 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3710 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3711 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3713 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3714 | 4822 051 30223 | 22kΩ 5% 0.062W |
| 3716 | 4822 051 30153 | 15kΩ 5% 0.062W |
| 3720 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3721 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3723 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3724 | 4822 051 30223 | 22kΩ 5% 0.062W |

| | | |
|---|---|---|
| 3726 | 4822 051 30153 | 15kΩ 5% 0.062W |
| 3730 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3731 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3740 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3741 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3796 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3797 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3798 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3800 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3801 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3802 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3803 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3804 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3805 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3806 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3807 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3808 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3809 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3810 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3811 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3812 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3813 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3815 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3816 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3820 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3821 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3822 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3840 | 4822 051 30223 | 22kΩ 5% 0.062W |
| 3841 | 4822 051 30223 | 22kΩ 5% 0.062W |
| 3843 | 4822 051 30393 | 39kΩ 5% 0.062W |
| 3844 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3845 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3846 | 4822 051 30223 | 22kΩ 5% 0.062W |
| 3847 | 4822 051 30393 | 39kΩ 5% 0.062W |
| 3848 | 4822 051 30393 | 39kΩ 5% 0.062W |
| 3849 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3850 | 4822 051 30223 | 22kΩ 5% 0.062W |
| 3851 | 4822 051 30223 | 22kΩ 5% 0.062W |
| 3853 | 4822 051 30393 | 39kΩ 5% 0.062W |
| 3854 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3855 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3856 | 4822 051 30223 | 22kΩ 5% 0.062W |
| 3857 | 4822 051 30393 | 39kΩ 5% 0.062W |
| 3858 | 4822 051 30393 | 39kΩ 5% 0.062W |
| 3859 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3860 | 4822 117 12902 | 8.2kΩ 1% 0.063W 0603 |
| 3861 | 4822 051 30223 | 22kΩ 5% 0.062W |
| 3862 | 4822 051 30273 | 27kΩ 5% 0.062W |
| 3863 | 4822 117 12902 | 8.2kΩ 1% 0.063W 0603 |
| 3864 | 4822 051 30223 | 22kΩ 5% 0.062W |
| 3865 | 4822 051 30273 | 27kΩ 5% 0.062W |
| 3866 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3867 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3870 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3879 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3880 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3900 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3901 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3905 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3906 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3907 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3908 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3909 | 4822 051 30152 | 1.5kΩ 5% 0.062W |
| 3910 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3911 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3912 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3913 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3917 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3918 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3919 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3922 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3923 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3924 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3925 | 4822 051 30151 | 150Ω 5% 0.062W |
| 3926 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3927 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3928 | 4822 051 30331 | 330Ω 5% 0.062W |
| 4006 | 4822 051 30008 | Jumper 0603 |
| 4007 | 4822 051 30008 | Jumper 0603 |
| 4009 | 4822 051 30008 | Jumper 0603 |
| 4010 | 4822 051 30008 | Jumper 0603 |
| 4146 | 4822 051 30008 | Jumper 0603 |
| 4152 | 4822 051 30008 | Jumper 0603 |
| 4158 | 4822 051 30008 | Jumper 0603 |
| 4201 | 4822 051 30008 | Jumper 0603 |
| 4202 | 4822 051 30008 | Jumper 0603 |
| 4203 | 4822 051 30008 | Jumper 0603 |
| 4315 | 4822 051 30008 | Jumper 0603 |
| 4325 | 4822 051 30008 | Jumper 0603 |
| 4335 | 4822 051 30008 | Jumper 0603 |
| 4385 | 4822 051 30008 | Jumper 0603 |
| 4431 | 4822 051 30008 | Jumper 0603 |
| 4572 | 4822 051 30008 | Jumper 0603 |
| 4574 | 4822 051 30008 | Jumper 0603 |
| 4582 | 4822 051 30008 | Jumper 0603 |
| 4605 | 4822 051 30008 | Jumper 0603 |
| 4659 | 4822 051 30008 | Jumper 0603 |
| 4680 | 4822 051 30008 | Jumper 0603 |
| 4684 | 4822 051 30008 | Jumper 0603 |
| 4794 | 4822 051 30008 | Jumper 0603 |
| 4797 | 4822 051 30008 | Jumper 0603 |
| 4800 | 4822 051 30008 | Jumper 0603 |
| 4801 | 4822 051 30008 | Jumper 0603 |
| 4810 | 4822 051 30008 | Jumper 0603 |
| 4811 | 4822 051 30008 | Jumper 0603 |
| 4871 | 4822 051 30008 | Jumper 0603 |
| 4874 | 4822 051 30008 | Jumper 0603 |
| 4875 | 4822 051 30008 | Jumper 0603 |
| 4884 | 4822 051 30008 | Jumper 0603 |
| 4894 | 4822 051 30008 | Jumper 0603 |

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|---|---|---|
| 5140 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5162 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5164 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5196 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5197 | 2422 549 43769 | Bead 30Ω at 100MHz |
| 5198 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5199 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5300 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5302 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5352 | 2422 549 43769 | Bead 30Ω at 100MHz |
| 5520 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5521 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5522 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5523 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5524 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5530 | 2422 549 43769 | Bead 30Ω at 100MHz |
| 5541 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5570 | 3198 018 51090 | 10μH 10% 0603 |
| 5572 | 2422 549 43769 | Bead 30Ω at 100MHz |
| 5574 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5628 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5630 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5642 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5643 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5644 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5645 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5646 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5647 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5648 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5649 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5670 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5672 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5673 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5796 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5810 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5820 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5822 | 2422 549 43769 | Bead 30Ω at 100MHz |
| 5834 | 2422 549 43769 | Bead 30Ω at 100MHz |
| 5870 | 2422 549 43769 | Bead 30Ω at 100MHz |

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|---|---|---|
| 6007 | 9322 149 96685 | BZX384-C2V4 |
| 6019 | 9322 149 96685 | BZX384-C2V4 |
| 6166 | 9322 149 96685 | BZX384-C2V4 |
| 6302 | 4822 130 10654 | BAT254 |
| 6310 | 4822 130 10654 | BAT254 |
| 6311 | 4822 130 10654 | BAT254 |
| 6315 | 9340 548 71115 | SM PDZ33B |
| 6316 | 9340 548 71115 | SM PDZ33B |
| 6317 | 9340 548 71115 | SM PDZ33B |
| 6318 | 9340 548 71115 | SM PDZ33B |
| 6319 | 9340 548 71115 | SM PDZ33B |
| 6320 | 9340 548 71115 | SM PDZ33B |
| 6321 | 9340 548 71115 | SM PDZ33B |
| 6322 | 9340 548 71115 | SM PDZ33B |
| 6323 | 9340 548 71115 | SM PDZ33B |
| 6324 | 9340 548 71115 | SM PDZ33B |
| 6354 | 9340 548 71115 | SM PDZ33B |
| 6355 | 9340 548 71115 | SM PDZ33B |
| 6356 | 9340 548 71115 | SM PDZ33B |
| 6357 | 9340 548 71115 | SM PDZ33B |
| 6378 | 4822 130 83757 | BAS216 |
| 6380 | 4822 130 10654 | BAT254 |
| 6381 | 4822 130 10654 | BAT254 |
| 6388 | 4822 130 11422 | PLVA2650A |
| 6393 | 4822 130 11422 | PLVA2650A |
| 6399 | 4822 130 11422 | PLVA2650A |
| 6503 | 9322 149 96685 | BZX384-C2V4 |
| 6507 | 4822 130 10654 | BAT254 |
| 6508 | 4822 130 10654 | BAT254 |
| 6509 | 4822 130 10654 | BAT254 |
| 6551 | 4822 130 10328 | BAV99W |
| 6552 | 4822 130 10328 | BAV99W |
| 6553 | 4822 130 10328 | BAV99W |
| 6554 | 4822 130 10328 | BAV99W |
| 6555 | 4822 130 10328 | BAV99W |
| 6630 | 4822 130 10654 | BAT254 |
| 6710 | 9340 548 71115 | SM PDZ33B |
| 6711 | 9340 548 71115 | SM PDZ33B |
| 6720 | 9340 548 71115 | SM PDZ33B |
| 6721 | 9340 548 71115 | SM PDZ33B |
| 6730 | 9340 548 71115 | SM PDZ33B |
| 6731 | 9340 548 71115 | SM PDZ33B |
| 6740 | 9340 548 71115 | SM PDZ33B |
| 6741 | 9340 548 71115 | SM PDZ33B |
| 6802 | 9340 260 20115 | BAW56W |
| 6805 | 9340 260 20115 | BAW56W |
| 6807 | 9340 260 20115 | BAW56W |
| 6820 | 4822 130 10654 | BAT254 |
| 6821 | 4822 130 11422 | PLVA2650A |

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|---|---|---|
| 7145 | 3198 010 42310 | BC847BW |
| 7151 | 3198 010 42310 | BC847BW |
| 7157 | 3198 010 42310 | BC847BW |
| 7165 | 3198 010 42310 | BC847BW |
| 7170 | 9322 160 96671 | AD9887KS-140 |
| 7175 | 4822 209 17398 | LD1117DT33 |
| 7303 | 4822 209 30212 | PC74HCT125T |
| 7308 | 3198 010 42310 | BC847BW |
| 7310 | 3198 010 42310 | BC847BW |
| 7311 | 9322 145 66668 | TSH93ID |
| 7315 | 3198 010 42310 | BC847BW |
| 7316 | 3198 010 42310 | BC847BW |
| 7318 | 3198 010 42310 | BC847BW |
| 7320 | 3198 010 42310 | BC847BW |
| 7321 | 3198 010 42310 | BC847BW |
| 7322 | 3198 010 42310 | BC847BW |
| 7323 | 3198 010 42310 | BC847BW |
| 7325 | 3198 010 42310 | BC847BW |
| 7326 | 3198 010 42310 | BC847BW |
| 7328 | 3198 010 42310 | BC847BW |
| 7340 | 9337 153 10118 | 74HCT4052D |
| 7352 | 9322 160 17668 | ST202ECD |
| 7370 | 4822 209 71585 | 74HCT4538N |
| 7383 | 9352 684 81557 | SAA5801H/015 |
| 7405 | 3198 010 42310 | BC847BW |
| 7406 | 3198 010 42310 | BC847BW |
| 7430 | 9322 156 81668 | M24C32-WMN6TNKSA |
| 7500 | 9322 157 20668 | MSM51V18165F-60J |
| 7510 | 9352 499 60118 | 74LVC00AD |
| 7515 | 3198 010 42310 | BC847BW |
| 7516 | 3198 010 42320 | BC857BW |
| 7517 | 9322 158 67685 | ADM810TART |
| 7530 | 4822 209 90188 | PCF8591T |
| 7540 | 5322 209 33172 | PCF8574AT |
| 7550 | 5322 209 11598 | PC74HCT4538T |
| 7555 | 5322 209 11598 | PC74HCT4538T |
| 7563 | 3198 010 42310 | BC847BW |
| 7570 | 9322 137 99668 | FS6377-01 |
| 7571 | 5322 209 11598 | PC74HCT4538T |
| 7574 | 9352 317 00118 | 74LVC125AD |
| 7580 | 9322 156 81668 | M24C32-WMN6TNKSA |
| 7605 | 9322 158 73671 | PW164-10R |
| 7628 | 9322 164 75682 | CY62126BVLL-70ZI |
| 7640 | 4822 209 16406 | TL431ACD |
| 7641 | 9322 157 95668 | STD16NE06L |
| 7655 | 9322 141 53682 | EPC2LC20 |
| 7670 | 9322 159 45668 | DS90C385MTD |
| 7675 | 9340 560 36235 | BSH111 |
| 7676 | 9340 560 36235 | BSH111 |
| 7714 | 4822 209 30095 | LM833D |
| 7801 | 3198 010 42310 | BC847BW |
| 7802 | 3198 010 42310 | BC847BW |
| 7803 | 3198 010 42320 | BC857BW |
| 7805 | 9340 547 13215 | BSH103 |
| 7806 | 9340 547 13215 | BSH103 |
| 7807 | 9340 547 13215 | BSH103 |
| 7808 | 9340 547 13215 | BSH103 |
| 7812 | 9322 167 63668 | MSP3415G-QG-B8 |
| 7841 | 4822 209 30095 | LM833D |
| 7851 | 4822 209 30095 | LM833D |
| 7861 | 9322 173 77668 | TS462CD |
| 7870 | 9322 167 76668 | TC74HC590AF |
| 7874 | 9322 167 76668 | TC74HC590AF |
| 7879 | 3198 010 42310 | BC847BW |
| 7880 | 9322 153 66668 | CY7C199-15ZC |
| 7881 | 9351 869 80118 | 74HCT573DB |
| 7882 | 9351 869 80118 | 74HCT573DB |

## VGA Connector Panel [VGA]

### Various

| | | |
|---|---|---|
| 0301 | 2422 025 17136 | Connector 20P m |
| 0305 | 2422 025 16705 | Connector 12P m |
| 0315 | 2422 025 16542 | Connector 2P M |
| 0318 | 2422 025 17183 | Connector 32P f |
| 0318 | 2422 025 17233 | Connector 32P f |
| 0319 | 2422 025 17047 | Connector 13P m |
| 0320 | 2422 025 16545 | Connector 10P m |
| 0371 | 2422 025 17027 | Connector 15P F |
| 0371 | 4822 267 51477 | Socket 15P f |
| 0372 | 2422 025 17027 | Connector 15P F |
| 0372 | 4822 267 51477 | Socket 15P f |
| 0374 | 2422 026 05276 | Socket 1P f Orange |
| 0382 | 2422 025 17253 | Connector 10P m |
| 0382 | 2422 025 17274 | Connector 10P m |
| 0385 | 2422 025 17253 | Connector 10P m |
| 0385 | 2422 025 17274 | Connector 10P m |
| 0388 | 2422 025 16703 | Connector 7P m |
| 0604 | 3122 357 00301 | Software (check Prod.Surv.) |
| 0605 | 3122 357 00311 | Software (check Prod.Surv.) |
| 1100 | 2422 086 11009 | Fuse T1.A 63V 2410 |
| 1170 | 2422 086 11031 | Fuse SMD 500mA 63V |
| 1415 | 2422 543 89022 | Xtal 6MHz 20pF CX5F |
| 1570 | 2422 543 01115 | Crystal 24.576MHz |
| 1575 | 2422 086 11031 | Fuse SMD 500mA 63V |
| 1670 | 2422 086 11031 | Fuse SMD 500mA 63V |

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|---|---|---|
| 2007 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2009 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2061 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2066 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2090 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2097 | 3198 016 31080 | 1pF 25% 50V 0603 |
| 2103 | 3198 016 31080 | 1pF 25% 50V 0603 |
| 2142 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2144 | 5322 124 41945 | 22µF 20% 35V |
| 2146 | 3198 017 34730 | 47nF 16V 0603 |
| 2147 | 5322 124 41945 | 22µF 20% 35V |
| 2150 | 5322 124 41945 | 22µF 20% 35V |
| 2151 | 3198 017 34730 | 47nF 16V 0603 |
| 2152 | 3198 017 34730 | 47nF 16V 0603 |
| 2153 | 5322 124 41945 | 22µF 20% 35V |
| 2156 | 5322 124 41945 | 22µF 20% 35V |
| 2158 | 3198 017 34730 | 47nF 16V 0603 |
| 2159 | 5322 124 41945 | 22µF 20% 35V |
| 2164 | 4822 124 12095 | 100µF 20% 16V |
| 2165 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2166 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2167 | 4822 124 12095 | 100µF 20% 16V |
| 2170 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2171 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2172 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2173 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2174 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2175 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2176 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2177 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2178 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2179 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2180 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2181 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2182 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2183 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2184 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2185 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2186 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2187 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2188 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2189 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2190 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2191 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2192 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2193 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2195 | 4822 124 23002 | 10µF 20% 16V |
| 2196 | 4822 124 23002 | 10µF 20% 16V |
| 2197 | 4822 124 23002 | 10µF 20% 16V |
| 2198 | 4822 124 23002 | 10µF 20% 16V |
| 2199 | 4822 124 23002 | 10µF 20% 16V |
| 2205 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2206 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2207 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2208 | 4822 126 14127 | 39nF 10% 50V 0805 |
| 2210 | 5322 126 11581 | 3.9nF 10% 63V 0603 |
| 2212 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2300 | 4822 124 12095 | 100µF 20% 16V |
| 2301 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2302 | 4822 124 23002 | 10µF 20% 16V |
| 2304 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2308 | 5322 124 41945 | 22µF 20% 35V |
| 2310 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2311 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2318 | 5322 124 41945 | 22µF 20% 35V |
| 2328 | 5322 124 41945 | 22µF 20% 35V |
| 2340 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2351 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2352 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2353 | 4822 124 23002 | 10µF 20% 16V |
| 2354 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2355 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2356 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2365 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2370 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2372 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2375 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2376 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2381 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2382 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2383 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2415 | 2238 867 75339 | 33pF 5% 50V 0603 |
| 2416 | 4822 126 11669 | 27pF 5% 50V 0603 |
| 2420 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2432 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2433 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2434 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2435 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2436 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2437 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2438 | 4822 126 13879 | 220nF 20% 16V |
| 2439 | 4822 126 13879 | 220nF 20% 16V |
| 2446 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2447 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2448 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2499 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2500 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2501 | 4822 126 14226 | 82pF 5% 50V 0603 |
| 2502 | 4822 126 14226 | 82pF 5% 50V 0603 |
| 2503 | 4822 126 14226 | 82pF 5% 50V 0603 |
| 2504 | 4822 126 14226 | 82pF 5% 50V 0603 |
| 2505 | 4822 126 14226 | 82pF 5% 50V 0603 |
| 2506 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2511 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2513 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2515 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2520 | 4822 124 23002 | 10µF 20% 16V |
| 2521 | 4822 124 23002 | 10µF 20% 16V |
| 2522 | 4822 124 23002 | 10µF 20% 16V |
| 2523 | 4822 124 23002 | 10µF 20% 16V |
| 2524 | 4822 124 23002 | 10µF 20% 16V |
| 2530 | 5322 124 41945 | 22µF 20% 35V |
| 2531 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2533 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2534 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2535 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2537 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2538 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2541 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2545 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2546 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2547 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2548 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2550 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2551 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2552 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2553 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2557 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2558 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2559 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2560 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2562 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2563 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2564 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2565 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2566 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2570 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2572 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2573 | 4822 124 23002 | 10µF 20% 16V |
| 2574 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2583 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2600 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2601 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2602 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2603 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2604 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2605 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2606 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2607 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2608 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2609 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2610 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2611 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2612 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2613 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2614 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2615 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2616 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2617 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2618 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2619 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2620 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2621 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2622 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2623 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2624 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2625 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2628 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2629 | 4822 122 33741 | 10pF 10% 50V |
| 2630 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2640 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2641 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2642 | 4822 124 23002 | 10µF 20% 16V |
| 2643 | 4822 124 23002 | 10µF 20% 16V |
| 2644 | 4822 124 23002 | 10µF 20% 16V |
| 2645 | 4822 124 23002 | 10µF 20% 16V |
| 2646 | 4822 124 23002 | 10µF 20% 16V |
| 2647 | 4822 124 23002 | 10µF 20% 16V |
| 2648 | 4822 124 23002 | 10µF 20% 16V |
| 2649 | 4822 124 23002 | 10µF 20% 16V |
| 2655 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2656 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2657 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2658 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2659 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2660 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2661 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2662 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2663 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2670 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2671 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2672 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2673 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2694 | 3198 016 31080 | 1pF 25% 50V 0603 |
| 2695 | 3198 016 31080 | 1pF 25% 50V 0603 |
| 2696 | 3198 016 31080 | 1pF 25% 50V 0603 |
| 2697 | 3198 016 31080 | 1pF 25% 50V 0603 |
| 2698 | 3198 016 31080 | 1pF 25% 50V 0603 |
| 2699 | 3198 016 31080 | 1pF 25% 50V 0603 |
| 2711 | 4822 122 31765 | 100pF 2% 63V |
| 2712 | 4822 126 14472 | 1µF 10% 10V 0805 |
| 2715 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2716 | 4822 122 33777 | 47pF 5% 63V |
| 2717 | 4822 126 14472 | 1µF 10% 10V 0805 |
| 2721 | 4822 122 31765 | 100pF 2% 63V |
| 2722 | 4822 126 14472 | 1µF 10% 10V 0805 |
| 2726 | 4822 122 33777 | 47pF 5% 63V |
| 2727 | 4822 126 14472 | 1µF 10% 10V 0805 |
| 2731 | 4822 122 31765 | 100pF 2% 63V |
| 2741 | 4822 122 31765 | 100pF 2% 63V |
| 2799 | 5322 124 41945 | 22µF 20% 35V |
| 2800 | 4822 124 12095 | 100µF 20% 16V |
| 2802 | 4822 124 23002 | 10µF 20% 16V |
| 2803 | 4822 124 23002 | 10µF 20% 16V |
| 2804 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2810 | 4822 124 12095 | 100µF 20% 16V |
| 2811 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2812 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2813 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2814 | 4822 126 14585 | 100nF 10% 50V |
| 2815 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2816 | 4822 124 23002 | 10µF 20% 16V |
| 2817 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2818 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2819 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2820 | 4822 124 23002 | 10µF 20% 16V |
| 2821 | 4822 124 23002 | 10µF 20% 16V |
| 2822 | 4822 126 14247 | 1.5nF 50V 0603 |
| 2823 | 4822 124 23002 | 10µF 20% 16V |
| 2824 | 4822 126 14247 | 1.5nF 50V 0603 |
| 2825 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2826 | 4822 126 14472 | 1µF 10% 10V 0805 |
| 2827 | 4822 126 14472 | 1µF 10% 10V 0805 |
| 2828 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2829 | 4822 124 23002 | 10µF 20% 16V |
| 2830 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2833 | 4822 126 14247 | 1.5nF 50V 0603 |
| 2834 | 4822 124 23002 | 10µF 20% 16V |
| 2837 | 4822 126 13881 | 470pF 5% 50V |
| 2838 | 4822 126 13881 | 470pF 5% 50V |
| 2839 | 4822 126 13881 | 470pF 5% 50V |
| 2840 | 4822 126 11669 | 27pF 5% 50V 0603 |
| 2842 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2843 | 4822 126 11669 | 27pF 5% 50V 0603 |
| 2844 | 3198 016 31020 | 1nF 10% 25V 0603 |

| | | |
|---|---|---|
| 2845 | 4822 126 13883 | 220pF 5% 50V |
| 2848 | 4822 126 11669 | 27pF 5% 50V 0603 |
| 2849 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2850 | 4822 126 11669 | 27pF 5% 50V 0603 |
| 2852 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2853 | 4822 126 11669 | 27pF 5% 50V 0603 |
| 2854 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2857 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2858 | 4822 126 11669 | 27pF 5% 50V 0603 |
| 2861 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2862 | 4822 122 33777 | 47pF 5% 63V |
| 2863 | 4822 126 14472 | 1µF 10% 10V 0805 |
| 2865 | 4822 122 33777 | 47pF 5% 63V |
| 2867 | 3198 016 31020 | 1nF 10% 25V 0603 |
| 2868 | 4822 126 14472 | 1µF 10% 10V 0805 |
| 2870 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2874 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2879 | 4822 126 11669 | 27pF 5% 50V 0603 |
| 2880 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2881 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2882 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2901 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2901 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2902 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2902 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2909 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2909 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2910 | 2238 586 59812 | 100nF 20-80% 50V 0603 |
| 2910 | 4822 126 14305 | 100nF 10% 16V 0603 |
| 2925 | 2020 552 94427 | 100pF 5% 50v 0603 |

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| | | |
|---|---|---|
| 3060 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3061 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3065 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3066 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3144 | 4822 051 30271 | 270Ω 5% 0.062W |
| 3145 | 4822 051 30223 | 22kΩ 5% 0.062W |
| 3146 | 4822 051 30561 | 560Ω 5% 0.062W |
| 3147 | 4822 051 30271 | 270Ω 5% 0.062W |
| 3148 | 4822 051 30223 | 22kΩ 5% 0.062W |
| 3149 | 4822 051 30561 | 560Ω 5% 0.062W |
| 3150 | 4822 051 30271 | 270Ω 5% 0.062W |
| 3151 | 4822 051 30223 | 22kΩ 5% 0.062W |
| 3152 | 4822 051 30561 | 560Ω 5% 0.062W |
| 3153 | 4822 051 30271 | 270Ω 5% 0.062W |
| 3154 | 4822 051 30223 | 22kΩ 5% 0.062W |
| 3155 | 4822 051 30561 | 560Ω 5% 0.062W |
| 3156 | 4822 051 30271 | 270Ω 5% 0.062W |
| 3157 | 4822 051 30223 | 22kΩ 5% 0.062W |
| 3158 | 4822 051 30561 | 560Ω 5% 0.062W |
| 3159 | 4822 051 30271 | 270Ω 5% 0.062W |
| 3160 | 4822 051 30223 | 22kΩ 5% 0.062W |
| 3161 | 4822 051 30561 | 560Ω 5% 0.062W |
| 3164 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3200 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3201 | 4822 051 30008 | Jumper 0603 |
| 3203 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3204 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3205 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3206 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3207 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3208 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3209 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3210 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3211 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3212 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3294 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3295 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3296 | 4822 051 30474 | 470kΩ 5% 0.062W |
| 3300 | 4822 051 30153 | 15kΩ 5% 0.062W |
| 3304 | 4822 051 30689 | 68Ω 5% 0.063W 0603 |
| 3305 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3306 | 4822 051 30153 | 15kΩ 5% 0.062W |
| 3307 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3308 | 4822 051 30271 | 270Ω 5% 0.062W |
| 3309 | 4822 051 30273 | 27kΩ 5% 0.062W |
| 3310 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3311 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3312 | 4822 117 12903 | 1.8kΩ 1% 0.063W 0603 |
| 3313 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3314 | 4822 117 12903 | 1.8kΩ 1% 0.063W 0603 |
| 3316 | 4822 051 30153 | 15kΩ 5% 0.062W |
| 3317 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3318 | 4822 051 30271 | 270Ω 5% 0.062W |
| 3319 | 4822 051 30273 | 27kΩ 5% 0.062W |
| 3320 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3321 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3322 | 4822 117 12903 | 1.8kΩ 1% 0.063W 0603 |
| 3323 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3324 | 4822 117 12903 | 1.8kΩ 1% 0.063W 0603 |
| 3326 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3327 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3328 | 4822 051 30271 | 270Ω 5% 0.062W |
| 3329 | 4822 051 30273 | 27kΩ 5% 0.062W |
| 3330 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3331 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3332 | 4822 117 12903 | 1.8kΩ 1% 0.063W 0603 |
| 3333 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3334 | 4822 117 12903 | 1.8kΩ 1% 0.063W 0603 |
| 3336 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3337 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3338 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3339 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3340 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3341 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3342 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3343 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3344 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3345 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3346 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3347 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3348 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3349 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3350 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3351 | 4822 051 30689 | 68Ω 5% 0.063W 0603 |
| 3352 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3353 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3354 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3355 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3359 | 4822 051 30689 | 68Ω 5% 0.063W 0603 |
| 3360 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3361 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3362 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3363 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3364 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3365 | 4822 051 30474 | 470kΩ 5% 0.062W |
| 3366 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3370 | 4822 051 30682 | 6.8kΩ 5% 0.062W |
| 3371 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3372 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3373 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3374 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3375 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3376 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3377 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3378 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3379 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3380 | 3198 031 11010 | 4 x 100Ω 5% 1206 |
| 3381 | 3198 031 11010 | 4 x 100Ω 5% 1206 |
| 3382 | 3198 031 11010 | 4 x 100Ω 5% 1206 |
| 3383 | 3198 031 11010 | 4 x 100Ω 5% 1206 |
| 3384 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3385 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3386 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3388 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3390 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3391 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3392 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3393 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3394 | 3198 031 11010 | 4 x 100Ω 5% 1206 |
| 3398 | 3198 031 11010 | 4 x 100Ω 5% 1206 |
| 3400 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3402 | 3198 031 11010 | 4 x 100Ω 5% 1206 |
| 3404 | 3198 031 11010 | 4 x 100Ω 5% 1206 |
| 3406 | 3198 031 11010 | 4 x 100Ω 5% 1206 |
| 3410 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3411 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3413 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3414 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3415 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3417 | 4822 051 30221 | 220Ω 5% 0.062W |
| 3418 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3419 | 4822 051 30392 | 3.9kΩ 5% 0.063W 0603 |
| 3420 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3421 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3422 | 4822 051 30152 | 1.5kΩ 5% 0.062W |
| 3423 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3424 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3426 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3428 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3429 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3430 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3431 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3432 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3433 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3435 | 4822 051 30273 | 27kΩ 5% 0.062W |
| 3436 | 4822 117 12891 | 220kΩ 1% 0.063W 0603 |
| 3448 | 3198 031 11010 | 4 x 100Ω 5% 1206 |
| 3449 | 3198 031 11010 | 4 x 100Ω 5% 1206 |
| 3450 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3451 | 3198 031 11010 | 4 x 100Ω 5% 1206 |
| 3452 | 3198 031 11010 | 4 x 100Ω 5% 1206 |
| 3453 | 3198 031 11010 | 4 x 100Ω 5% 1206 |
| 3460 | 3198 031 11010 | 4 x 100Ω 5% 1206 |
| 3461 | 3198 031 11010 | 4 x 100Ω 5% 1206 |
| 3462 | 3198 031 11010 | 4 x 100Ω 5% 1206 |
| 3463 | 3198 031 11010 | 4 x 100Ω 5% 1206 |
| 3464 | 3198 031 11010 | 4 x 100Ω 5% 1206 |
| 3483 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3485 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3486 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3487 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3488 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3489 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3490 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3494 | 3198 031 14710 | 4 x 470Ω 5% 1206 |
| 3506 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3507 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3510 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3511 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3512 | 4822 051 30562 | 5.6kΩ 5% 0.063W 0603 |
| 3513 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3514 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3515 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3516 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3517 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3518 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3530 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3531 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3532 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3533 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3534 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3535 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3536 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3537 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3538 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3539 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3540 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3541 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3545 | 4822 051 30221 | 220Ω 5% 0.062W |
| 3547 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3548 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3550 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3551 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3552 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3553 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3554 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3557 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3558 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3559 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3560 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3562 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3570 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3571 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3575 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3580 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3581 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3582 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3583 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3590 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3591 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3592 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3593 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3600 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3601 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3602 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3603 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3604 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3605 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3606 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3607 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3608 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3609 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3610 | 4822 051 30479 | 47Ω 5% 0.062W |
| 3615 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3620 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3621 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3622 | 4822 051 30479 | 47Ω 5% 0.062W |
| 3623 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3628 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3630 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3631 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3632 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3633 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3634 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3635 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3636 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3640 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3641 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3653 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3654 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3655 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3657 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3658 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3660 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3661 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3662 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3663 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3664 | 4822 051 30101 | 100Ω 5% 0.062W |

| | | |
|---|---|---|
| 3670 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3673 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3674 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3675 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3676 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3677 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3678 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3679 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3680 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3681 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3682 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3684 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3685 | 4822 051 30222 | 2.2kΩ 5% 0.062W |
| 3686 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3710 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3711 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3713 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3714 | 4822 051 30223 | 22kΩ 5% 0.062W |
| 3716 | 4822 051 30153 | 15kΩ 5% 0.062W |
| 3720 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3721 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3723 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3724 | 4822 051 30223 | 22kΩ 5% 0.062W |
| 3726 | 4822 051 30153 | 15kΩ 5% 0.062W |
| 3730 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3731 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3740 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3741 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3796 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3797 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3798 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3800 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3801 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3802 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3803 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3804 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3805 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3806 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3807 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3808 | 4822 117 13632 | 100kΩ 1% 0603 0.62W |
| 3810 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3811 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3812 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3813 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3814 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3815 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3816 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3820 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3821 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3822 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3840 | 4822 051 30223 | 22kΩ 5% 0.062W |
| 3841 | 4822 051 30223 | 22kΩ 5% 0.062W |
| 3843 | 4822 051 30393 | 39kΩ 5% 0.062W |
| 3844 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3845 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3846 | 4822 051 30223 | 22kΩ 5% 0.062W |
| 3847 | 4822 051 30393 | 39kΩ 5% 0.062W |
| 3848 | 4822 051 30393 | 39kΩ 5% 0.062W |
| 3849 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3850 | 4822 051 30223 | 22kΩ 5% 0.062W |
| 3851 | 4822 051 30223 | 22kΩ 5% 0.062W |
| 3853 | 4822 051 30393 | 39kΩ 5% 0.062W |
| 3854 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3855 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3856 | 4822 051 30223 | 22kΩ 5% 0.062W |
| 3857 | 4822 051 30393 | 39kΩ 5% 0.062W |
| 3858 | 4822 051 30393 | 39kΩ 5% 0.062W |
| 3859 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3860 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3861 | 4822 051 30223 | 22kΩ 5% 0.062W |
| 3862 | 4822 051 30273 | 27kΩ 5% 0.062W |
| 3863 | 4822 051 30332 | 3.3kΩ 5% 0.062W |
| 3864 | 4822 051 30223 | 22kΩ 5% 0.062W |
| 3865 | 4822 051 30273 | 27kΩ 5% 0.062W |
| 3866 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3867 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3870 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3879 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3880 | 4822 051 30471 | 470Ω 5% 0.062W |
| 3900 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3900 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3900 | 4822 051 30759 | 75Ω 5% 0.062W |
| 3901 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3901 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3901 | 4822 051 30759 | 75Ω 5% 0.062W |
| 3902 | 4822 051 30331 | 330Ω 5% 0.062W |
| 3902 | 4822 051 30759 | 75Ω 5% 0.062W |
| 3903 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3904 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3905 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3906 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3906 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3907 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3907 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3908 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3908 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3909 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3910 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3910 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3911 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3911 | 4822 117 12925 | 47kΩ 1% 0.063W 0603 |
| 3912 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3912 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3913 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3914 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3915 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3916 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3917 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3918 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3919 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3920 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3921 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3922 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3923 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3924 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3925 | 4822 051 30102 | 1kΩ 5% 0.062W |
| 3926 | 4822 051 30101 | 100Ω 5% 0.062W |
| 3927 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3928 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3929 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3930 | 4822 051 30472 | 4.7kΩ 5% 0.062W |
| 3934 | 4822 051 30103 | 10kΩ 5% 0.062W |
| 3935 | 4822 051 30333 | 33kΩ 5% 0.062W |
| 3999 | 4822 051 30152 | 1.5kΩ 5% 0.062W |
| 4006 | 4822 051 30008 | Jumper 0603 |
| 4007 | 4822 051 30008 | Jumper 0603 |
| 4009 | 4822 051 30008 | Jumper 0603 |
| 4010 | 4822 051 30008 | Jumper 0603 |
| 4146 | 4822 051 30008 | Jumper 0603 |
| 4152 | 4822 051 30008 | Jumper 0603 |
| 4158 | 4822 051 30008 | Jumper 0603 |
| 4200 | 4822 051 30008 | Jumper 0603 |
| 4250 | 4822 051 30008 | Jumper 0603 |
| 4315 | 4822 051 30008 | Jumper 0603 |
| 4325 | 4822 051 30008 | Jumper 0603 |
| 4335 | 4822 051 30008 | Jumper 0603 |
| 4381 | 4822 051 30008 | Jumper 0603 |
| 4431 | 4822 051 30008 | Jumper 0603 |
| 4500 | 4822 051 30008 | Jumper 0603 |
| 4505 | 4822 051 30008 | Jumper 0603 |
| 4506 | 4822 051 30008 | Jumper 0603 |
| 4572 | 4822 051 30008 | Jumper 0603 |
| 4574 | 4822 051 30008 | Jumper 0603 |
| 4581 | 4822 051 30008 | Jumper 0603 |
| 4591 | 4822 051 30008 | Jumper 0603 |
| 4659 | 4822 051 30008 | Jumper 0603 |
| 4794 | 4822 051 30008 | Jumper 0603 |
| 4797 | 4822 051 30008 | Jumper 0603 |
| 4800 | 4822 051 30008 | Jumper 0603 |
| 4801 | 4822 051 30008 | Jumper 0603 |
| 4810 | 4822 051 30008 | Jumper 0603 |
| 4811 | 4822 051 30008 | Jumper 0603 |
| 4834 | 4822 051 30008 | Jumper 0603 |
| 4871 | 4822 051 30008 | Jumper 0603 |
| 4874 | 4822 051 30008 | Jumper 0603 |
| 4875 | 4822 051 30008 | Jumper 0603 |
| 4884 | 4822 051 30008 | Jumper 0603 |
| 4894 | 4822 051 30008 | Jumper 0603 |

| | | |
|---|---|---|
| 5008 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5140 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5164 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5196 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5197 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5198 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5199 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5300 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5302 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5352 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5520 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5521 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5522 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5523 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5524 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5530 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5541 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5570 | 3198 018 51090 | 10μH 10% 0603 |
| 5572 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5574 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5628 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5630 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5642 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5643 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5644 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5645 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5646 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5647 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5648 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5649 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5670 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5672 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5673 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5796 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5810 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5820 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5822 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5834 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5870 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5900 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5900 | 4822 157 11074 | Bead 600Ω at 100MHz |
| 5901 | 2422 549 43062 | Bead 600Ω at 100MHz |
| 5901 | 4822 157 11074 | Bead 600Ω at 100MHz |

| | | |
|---|---|---|
| 6166 | 9322 149 96685 | BZX384-C2V4 |
| 6302 | 4822 130 10654 | BAT254 |
| 6310 | 4822 130 10654 | BAT254 |
| 6311 | 4822 130 10654 | BAT254 |
| 6354 | 9322 149 10685 | BZM55-C33 |
| 6355 | 9322 149 10685 | BZM55-C33 |
| 6356 | 9322 149 10685 | BZM55-C33 |
| 6357 | 9322 149 10685 | BZM55-C33 |
| 6365 | 9322 129 38685 | BZM55-C6V8 |
| 6366 | 4822 130 83757 | BAS216 |
| 6378 | 4822 130 83757 | BAS216 |
| 6379 | 4822 130 83757 | BAS216 |
| 6380 | 4822 130 11422 | PLVA2650A |
| 6388 | 4822 130 11422 | PLVA2650A |
| 6393 | 4822 130 11422 | PLVA2650A |
| 6399 | 4822 130 11422 | PLVA2650A |
| 6507 | 4822 130 83757 | BAS216 |
| 6630 | 4822 130 10654 | BAT254 |
| 6710 | 9322 149 10685 | BZM55-C33 |
| 6711 | 9322 149 10685 | BZM55-C33 |
| 6720 | 9322 149 10685 | BZM55-C33 |
| 6721 | 9322 149 10685 | BZM55-C33 |
| 6730 | 9322 149 10685 | BZM55-C33 |
| 6731 | 9322 149 10685 | BZM55-C33 |
| 6740 | 9322 149 10685 | BZM55-C33 |
| 6741 | 9322 149 10685 | BZM55-C33 |
| 6802 | 9340 260 20115 | BAW56W |
| 6805 | 9340 260 20115 | BAW56W |
| 6807 | 9340 260 20115 | BAW56W |
| 6820 | 4822 130 10654 | BAT254 |
| 6900 | 9322 149 10685 | BZM55-C33 |
| 6901 | 9322 149 10685 | BZM55-C33 |
| 6902 | 9322 149 10685 | BZM55-C33 |
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| 6904 | 4822 130 10654 | BAT254 |
| 6905 | 4822 130 10654 | BAT254 |
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| 6912 | 9322 149 10685 | BZM55-C33 |
| 6913 | 9322 149 10685 | BZM55-C33 |
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| 6915 | 9322 149 10685 | BZM55-C33 |
| 6916 | 4822 130 10654 | BAT254 |
| 6918 | 9322 149 10685 | BZM55-C33 |
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| 6921 | 9322 149 10685 | BZM55-C33 |
| 6922 | 9322 149 10685 | BZM55-C33 |
| 6923 | 9322 149 10685 | BZM55-C33 |
| 6925 | 9322 149 10685 | BZM55-C33 |

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| 7065 | 3198 010 42310 | BC847BW |
| 7145 | 3198 010 42310 | BC847BW |
| 7148 | 3198 010 42310 | BC847BW |
| 7151 | 3198 010 42310 | BC847BW |
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| 7157 | 3198 010 42310 | BC847BW |
| 7160 | 3198 010 42310 | BC847BW |
| 7165 | 3198 010 42310 | BC847BW |
| 7170 | 9322 160 96671 | AD9887KS-140 |
| 7175 | 4822 209 17239 | LD1117DT33C |
| 7303 | 4822 209 30212 | PC74HCT125T |
| 7308 | 3198 010 42310 | BC847BW |
| 7310 | 3198 010 42310 | BC847BW |
| 7311 | 9322 145 66668 | TSH93ID |

| | | |
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| 7315 | 3198 010 42310 | BC847BW |
| 7316 | 3198 010 42310 | BC847BW |
| 7318 | 3198 010 42310 | BC847BW |
| 7320 | 3198 010 42310 | BC847BW |
| 7321 | 3198 010 42310 | BC847BW |
| 7322 | 3198 010 42310 | BC847BW |
| 7323 | 3198 010 42310 | BC847BW |
| 7325 | 3198 010 42310 | BC847BW |
| 7326 | 3198 010 42310 | BC847BW |
| 7328 | 3198 010 42310 | BC847BW |
| 7340 | 4822 209 15765 | 74HC4052D |
| 7341 | 3198 010 42310 | BC847BW |
| 7343 | 3198 010 42310 | BC847BW |
| 7352 | 9322 160 17668 | ST202ECD |
| 7360 | 3198 010 42310 | BC847BW |
| 7364 | 3198 010 42310 | BC847BW |
| 7370 | 4822 209 71585 | 74HCT4538N |
| 7383 | 9352 684 81557 | SAA5801H/015 |
| 7430 | 9322 156 81668 | M24C32-WMN6TNKSA |
| 7435 | 3198 010 42310 | BC847BW |
| 7500 | 9322 157 20668 | MSM51V18165F-60J |
| 7515 | 3198 010 42310 | BC847BW |
| 7516 | 5322 130 42756 | BC857C |
| 7517 | 9322 158 67685 | ADM810TART |
| 7530 | 4822 209 90188 | PCF8591T |
| 7540 | 5322 209 33172 | PCF8574AT |
| 7563 | 3198 010 42310 | BC847BW |
| 7570 | 9322 137 99668 | FS6377-01 |
| 7574 | 9352 317 00118 | 74LVC125AD |
| 7580 | 9322 156 81668 | M24C32-WMN6TNKSA |
| 7605 | 9322 158 73671 | PW164-10R |
| 7628 | 9322 164 75682 | CY62126BVLL-70ZI |
| 7631 | 3198 010 42310 | BC847BW |
| 7640 | 4822 209 16406 | TL431ACD |
| 7641 | 9322 157 95668 | STD16NE06L |
| 7655 | 9322 141 53682 | EPC2LC20 |
| 7670 | 9322 159 45668 | DS90C385MTD |
| 7675 | 9340 547 13215 | BSH103 |
| 7676 | 9340 547 13215 | BSH103 |
| 7714 | 4822 209 30095 | LM833D |
| 7801 | 3198 010 42310 | BC847BW |
| 7802 | 3198 010 42310 | BC847BW |
| 7803 | 5322 130 42756 | BC857C |
| 7805 | 9340 547 13215 | BSH103 |
| 7806 | 9340 547 13215 | BSH103 |
| 7807 | 9340 547 13215 | BSH103 |
| 7808 | 9340 547 13215 | BSH103 |
| 7812 | 9322 167 63668 | MSP3415G-QG-B8 |
| 7841 | 4822 209 30095 | LM833D |
| 7851 | 4822 209 30095 | LM833D |
| 7861 | 4822 209 30095 | LM833D |
| 7870 | 9322 167 76668 | TC74HC590AF |
| 7874 | 9322 167 76668 | TC74HC590AF |
| 7879 | 3198 010 42310 | BC847BW |
| 7880 | 9322 153 66668 | CY7C199-15ZC |
| 7881 | 9351 869 80118 | 74HCT573DB |
| 7882 | 9351 869 80118 | 74HCT573DB |
| 7900 | 5322 209 71568 | PC74HCT14T |
| 7904 | 9322 046 99668 | ST24FC21M6 |
| 7907 | 9322 046 99668 | ST24FC21M6 |
| 7910 | 4822 209 30212 | PC74HCT125T |
| 7915 | 3198 010 42310 | BC847BW |
| 7915 | 9340 217 70115 | BC847BW |

# 11. Revision List

First release